SAMSUNG

SYSTEM AIR CONDITIONER

Basic : NS070LHXEA&UH070EAV2
DH070EAV1&UH070EAV2

Model :

NS035LDXEA	RC035DHXEA
NS052LDXEA	RC052DHXEA
NS071LDXEA	RC071DHXEA
NS052SDXEA	RC052DHXEA
NS071SDXEA	RC071DHXEA

Model Code :

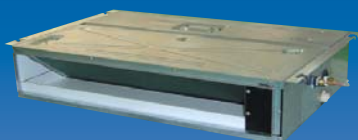|	
NS035LDXEA	RC035DHXEA
NS052LDXEA	RC052DHXEA
NS071LDXEA	RC071DHXEA
NS052SDXEA	RC052DHXEA
NS071SDXEA	RC071DHXEA

SERVICE Manual

AIR CONDITIONER

NS035/052/071LDXEA

NS052/071SDXEA

RC035/052DHXEA

RC071DHXEA

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Refer to the service manual in the GSPN(see the rear cover) for the more information.

Contents

1. Precautions

1-1 Installing the air conditioner

● Users should not install the air conditioner by themselves.
  Ask the dealer or authorized company to install the air conditioner except the window-type air conditioner in U.S.A and Canada.

● If you don't install the air conditioner properly, it may cause a fire, a water leakage or an electric shock.

● You must install the air conditioner according to the national wiring regulations and safety regulations.

● Install the indoor unit higher than 2.5m from the floor to avoid the injury caused by the operation of the fan. (except the window-type air conditioner)

● The manufacturer is not responsible for any accidents or injury caused by an incorrect installation.
  When installing the built-in type air conditioner, keep all electric cables such as the power cable and the connection cord in pipes, ducts, or cable channels to protect them from the danger of impact or any other incidents.
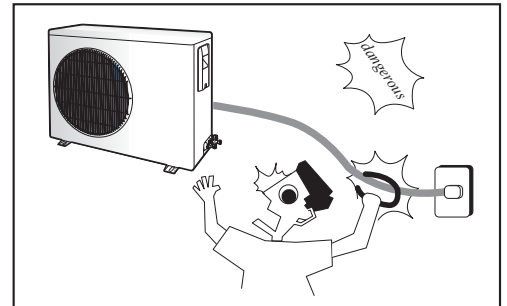
Avoid Dangerous Contact

1-2 Power supply and circuit breaker

● If the power cord of the air conditioner is damaged, it must be replaced by the manufacturer or a qualified person in order to avoid a hazard.

● The air conditioner must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker.
  An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.

● Do not extend an electric cord to the air conditioner.

● The air conditioner must be plugged in after you complete the installation.
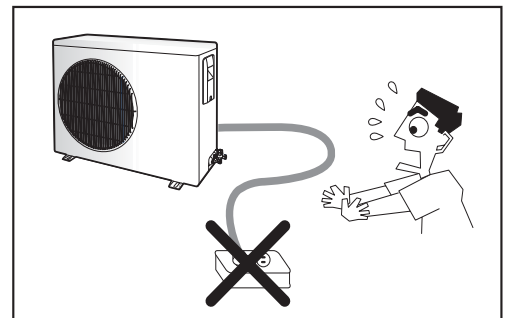
No Tapping and No Extension Cords

1-3 During operation

- Do not repair the air conditioner at your discretion.
  It is recommended to contact a service center directly.

- Never spill any kind of liquid on the air conditioner.
  If this happens, turn off the air conditioner and contact an authorized service center.

- Do not insert anything between the airflow blades to prevent damage of the inner fan and consequent injury. Keep children away from the air conditioner.

- Do not place any obstacles in front of the air conditioner.

- Do not spray any kind of liquid into the indoor unit. If this happens, turn off the air conditioner and contact a service center.

- Make sure that the air conditioner is well ventilated at all times:
  Do not place a cloth or other materials over it.

- Remove the batteries if you don't use the remote control for a long time. (If applicable)

- Use the remote control within 7 meters from the indoor unit. (If applicable)
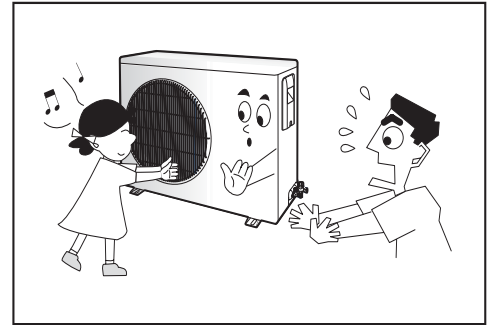
No children Nearby

1-4 Disposing of the unit

- Before throwing out the air conditioner, remove the batteries from the remote control.
- When you dispose of the air conditioner, consult your dealer. If pipes are removed incorrectly, refrigerant may blow out and cause air pollution. When it contacts with your skin, it can cause skin injury.
- The package of the air conditioner should be recycled or disposed of properly for environmental reasons.

1-5 Others

- Never store or load the air conditioner upside down or sideways to prevent the damage to the compressor.
- Young children or infirm persons should be always supervised when they use the air conditioner.
- Max current is measured according to IEC standard for safety.
- Current is measured according to ISO standard for energy efficiency.

2. Product Specifications

2-1 The Feature of Product

- **Built-in Cassette Type**

  After installed, the air conditioner can be harmonized with a room interior.

- **High Performance & Energy Saving**

  With the advanced BLDC inverter technology, it makes a room cool with highly energy saving and arises the efficiency of air conditioner.

- **Long Piping(Length & Height)**

  It can give the benefit to the installers and aries the reliability of the air conditioner.

- **Long Ambient Operation(In Low Temperature)**

  It can arise the reliability and the capacity of the air conditioner, especially operated in low temperature.

- **Eco-friendly Product(Lead-Free, RoHS, WEEE)**

2-2 Product Specifications

Model				Indoor Unit NS035LDXEA	Outdoor Unit RC035DHXEA
Performance	Cooling(MIN/STD/MAX)		W	950/ 3500/ 4000	
	Heating(MIN/STD/MAX)		W	720/4000/4600	
	Dehumidifying		ℓ/h	-	
	Air Volume	Cooling	m³/min	-	
		Heating	(H/M/L)	-	
	Noise	Cooling	dB	40	53
		Heating	(H/M/L)	40	53
	Energy Efficiency Ratio	Cooling	W/W	2.81	
		Heating		3.41	
	Power		ph/V/Hz	1/220~240V/50Hz	
Power	Power Consumption	Cooling	W	210/ 1245/ 1450	
		Heating		180/ 1173/ 1400	
	Operating Current	Cooling	A	1.6/ 6.0/ 6.6	
		Heating		1.2/ 5.7/ 6.6	
	Power Factor	Cooling	%	70/ 90/ 90	
		Heating		70/ 90/ 90	
Size	Outer Dimension	WidthxHeightxDepth	mm	900*199*600	790*548*285
			inch	-	-
	Weight(Net)		kg	26	33
	Compressor	Model		G4C090LUDJR	
		Motor	Type	Single BLDC	
			Rated Output	-	
	Oil Type			320cc, POE	
	Blower	Type		Blower	Propeller
		Motor	Type	SSR	BLDC
			Rated Output	W	-	-
Piping	Pipe O.D Size	Liquid	mm(inch) xL(m)	6.35(1/4)x5	
		Gas	mm(inch) xL(m)	9.53(3/8)x5	
	Connection Method			Flare	
	Between	Height	m	Max. 15	
		Pipe Length	m	Max. 20	
Heat Exerchanger				FP1.3*Slit*Slica	FP1.3*G-fin*SILLICA
Refrigerant Control Unit				EEV	
Freezer Oil Capacitor			cc	-	
Refrigerant to Change(R410A)			g	950	
Protection Device(OLP)				-	
Cooling Test Condition				DB27°CWB19°C	DB35°C WB24°C
Heating Test Condition				DB20°C WB15°C	DB7°C WB6°C

Product Specifications(cont.)

Model				Indoor Unit	Outdoor Unit
				NS052LDXEA	RC052DHXEA
Performance	Cooling(MIN/STD/MAX)		W	1200/ 5000/ 6000	
	Heating(MIN/STD/MAX)		W	700/6000/7000	
	Dehumidifying		ℓ/h	-	
	Air Volume	Cooling	m³/min	-	
		Heating	(H/M/L)	-	
	Noise	Cooling	dB	42	58
		Heating	(H/M/L)	42	58
	Energy Efficiency Ratio	Cooling	W/W	3.23	
		Heating		3.64	
	Power		ph/V/Hz	1/220~240V/50Hz	
Power	Power Consumption	Cooling	W	230/ 1550/ 2200	
		Heating		280/ 1650/ 2200	
	Operating Current	Cooling	A	1.3/ 7.0/ 9.8	
		Heating		1.6/ 7.5/ 10.0	
	Power Factor	Cooling	%	95/ 97/ 95	
		Heating		95/ 97/ 95	
Size	Outer Dimension	WidthxHeightxDepth	mm	1100*199*600	790*548*285
			inch	-	-
	Weight(Net)		kg	31	38.5
	Compressor	Model		UG4T150FUDJQ	
		Motor	Type	Twin BLDC	
			Rated Output	-	
	Oil Type			650cc, POE	
	Blower	Type		Blower	Propeller
		Motor	Type	SSR	BLDC
			Rated Output	W	-	-
Piping	Pipe O.D Size	Liquid	mm(inch) xL(m)	6.35(1/4)x5	
		Gas	mm(inch) xL(m)	12.7(1/2)x5	
	Connection Method			Flare	
	Between	Height	m	Max. 20	
		Pipe Length	m	Max. 30	
Heat Exerchanger				FP1.3*Slit*Slica	FP1.4*G-fin* Hydrofile
Refrigerant Control Unit				EEV	
Freezer Oil Capacitor			cc	-	
Refrigerant to Change(R410A)			g	1400 (10g/m)	
Protection Device(OLP)				-	
Cooling Test Condition				DB27°CWB19°C	DB35°C WB24°C
Heating Test Condition				DB20°C WB15°C	DB7°C WB6°C

Product Specifications(cont.)

Model				Indoor Unit NS071LDXEA	Outdoor Unit RC071DHXEA
Performance	Cooling(MIN/STD/MAX)		W	2200/ 7100/ 8000	
	Heating(MIN/STD/MAX)		W	1900/8000/9000	
	Dehumidifying		ℓ/h	-	
	Air Volume	Cooling	m³/min	9.54/14.2/15.88	
		Heating	(H/M/L)	11.37/16.87/18.68	
	Noise	Cooling	dB	44	60
		Heating	(H/M/L)	44	60
	Energy Efficiency Ratio	Cooling	W/W	3.21	
		Heating		3.61	
	Power		ph/V/Hz	1/220~240V/50Hz	
Power	Power Consumption	Cooling	W	350/ 2210/ 4000	
		Heating		350/ 2220/ 4000	
	Operating Current	Cooling	A	2/ 10.5/ 21	
		Heating		2/ 10.5/ 21	
	Power Factor	Cooling	%	90.6/ 97.4/ 97.76	
		Heating		92.1/ 97.5/ 97.3	
Size	Outer Dimension	WidthxHeightxDepth	mm	1100*600*199	880X310X798
			inch	-	-
	Weight(Net)		kg	32	54.5
	Compressor	Model		UG4T200FUAE4	
		Motor	Type	Twin BLDC	
			Rated Output	8.0µF/450V	
	Oil Type			650cc, POE	
	Blower	Type		Blower	Propeller
		Motor	Type	SSR	BLDC
			Rated Output	W	30	40
Piping	Pipe O.D Size	Liquid	mm(inch) xL(m)	6.35(1/4)x5	
		Gas	mm(inch) xL(m)	15.88(5/8)x5	
	Connection Method			Flare	
	Between	Height	m	Max.30	
		Pipe Length	m	Max50	
Heat Exerchanger				FP1.3*Slit*Slica	FP1.3*Louver
Refrigerant Control Unit				EEV	
Freezer Oil Capacitor			cc	650	
Refrigerant to Change(R410A)			g	1800(25g/m)	
Protection Device(OLP)				-	
Cooling Test Condition				DB27°CWB19°C	DB35°C WB24°C
Heating Test Condition				DB20°C WB15°C	DB7°C WB6°C

Product Specifications(cont.)

Model				Indoor Unit NS052SDXEA	Outdoor Unit RC052DHXEA
Performance	Cooling(MIN/STD/MAX)		W	1000/ 5000/ 6000	
	Heating(MIN/STD/MAX)		W	750/ 6000/ 7200	
	Dehumidifying		ℓ/h	-	
	Air Volume	Cooling	m³/min	-	
		Heating	(H/M/L)	-	
	Noise	Cooling	dB	45	58
		Heating	(H/M/L)	45	58
	Energy Efficiency Ratio	Cooling	W/W	3.21	
		Heating		3.41	
	Power		ph/V/Hz	1/220~240V/50Hz	
Power	Power Consumption	Cooling	W	430/ 1560/ 2200	
		Heating		330/ 1760/ 2300	
	Operating Current	Cooling	A	2.2/7.5/10.0	
		Heating		1.9/8.4/10.0	
	Power Factor	Cooling	%	95/ 97/ 95	
		Heating		95/ 97/ 95	
Size	Outer Dimension	WidthxHeightxDepth	mm	900*260*480	790*548*285
			inch	-	-
	Weight(Net)		kg	29.5	38.5
	Compressor	Model		UG4T150FUDJQ	
		Motor	Type	TWIN BLDC	
			Rated Output	-	
		Oil Type		650cc, POE	
	Blower	Type		Blower	Propeller
		Motor	Type	SSR	BLDC
			Rated Output	W	-	-
Piping	Pipe O.D Size	Liquid	mm(inch)xL(m)	6.35(1/4)x5	
		Gas	mm(inch)xL(m)	12.7(1/2)x5	
	Connection Method			Flare	
	Between	Height	m	Max. 20	
		Pipe Length	m	Max. 30	
Heat Exerchanger				FP1.3*H-fin*Slica	FP1.4*G-fin,*Hydrofile
Refrigerant Control Unit				EEV	
Freezer Oil Capacitor			cc	-	
Refrigerant to Change(R410A)			g	1400(10g/m)	
Protection Device(OLP)				-	
Cooling Test Condition				DB27°CWB19°C	DB35°C WB24°C
Heating Test Condition				DB20°C WB15°C	DB7°C WB6°C
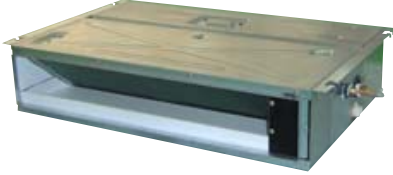
Product Specifications(cont.)

Model				Indoor Unit	Outdoor Unit
				NS071SDXEA	RC071DHXEA
Performance	Cooling(MIN/STD/MAX)		W	2200/ 7100/ 8000	
	Heating(MIN/STD/MAX)		W	1900/ 8000/ 9000	
	Dehumidifying		ℓ/h	-	
	Air Volume	Cooling	m³/min	17.86/19.84/20.65	
		Heating	(H/M/L)	15.27/20.03/22.48	
	Noise	Cooling	dB	45	60
		Heating	(H/M/L)	45	60
	Energy Efficiency Ratio	Cooling	W/W	3.21	
		Heating		3.61	
	Power		ph/V/Hz	1/220~240V/50Hz	
Power	Power Consumption	Cooling	W	350/ 2210/ 4000	
		Heating		350/ 2220/ 4000	
	Operating Current	Cooling	A	2/10.5/21.0	
		Heating		2/10.5/21.0	
	Power Factor	Cooling	%	90.2/ 97/ 97.3	
		Heating		90.3/ 97.2/ 97.6	
Size	Outer Dimension	WidthxHeightxDepth	mm	1150*480*260	880X310X798
			inch	-	-
	Weight(Net)		kg	33	54.5
	Compressor	Model		UG4T200FUAE4	
		Motor	Type	TWIN BLDC	
			Rated Output	8.0μF/450V	
	Oil Type			650cc, POE	
	Blower	Type		Blower	Propeller
		Motor	Type	SSR	BLDC
			Rated Output	W	30	40
Piping	Pipe O.D Size	Liquid	mm(inch) xL(m)	6.35(1/4)x5	
		Gas	mm(inch) xL(m)	15.88(5/8)x5	
	Connection Method			Flare	
	Between	Height	m	Max.30	
		Pipe Length	m	Max50	
Heat Exerchanger				FP1.3*Slit*Slica	FP1.3*Louver
Refrigerant Control Unit				EEV	
Freezer Oil Capacitor			cc	650	
Refrigerant to Change(R410A)			g	1800(25g/m)	
Protection Device(OLP)				-	
Cooling Test Condition				DB27°CWB19°C	DB35°C WB24°C
Heating Test Condition				DB20°C WB15°C	DB7°C WB6°C

2-3 The Comparative Specifications of Product

Item		NS035LDXEA/RC035DHXEA	NS035LHXEA/UH035EAV1(Basic)
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	26.0kg	22.0kg
	Outdoor Unit	33.0kg	50.0kg
Outer Dimension (WxHtxD)	Indoor Unit	990x199x600mm	990x199x600mm
	Outdoor Unit	790x548x285mm	790x548x285mm
Noise	Indoor Unit	40dB↓	40dB↓
	Outdoor Unit	53dB↓	53dB↓

The Comparative Specifications of Product(cont.)

Item		NS052LDXEA/RC052DHXEA	NS052LHXEA/UH052EAV1(Basic)
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	26.0kg	26.0kg
	Outdoor Unit	33.0kg	50.0kg
Outer Dimension (WxHtxD)	Indoor Unit	990x199x600mm	990x199x600mm
	Outdoor Unit	790x548x285mm	790x548x285mm
Noise	Indoor Unit	42dB↓	42dB↓
	Outdoor Unit	58dB↓	58dB↓

The Comparative Specifications of Product(cont.)

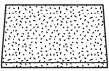| Item		NS071LDXEA/RC071DHXEA	NS071LHXEA/UH071EAV2(Basic)
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	32.0kg	32.0kg
	Outdoor Unit	54.5kg	54.5kg
Outer Dimension (WxHtxD)	Indoor Unit	1100x600x199mm	1100x600x199mm
	Outdoor Unit	880x310x798mm	880x310x798mm
Noise	Indoor Unit	44dB↓	44dB↓
	Outdoor Unit	60dB↓	60dB↓
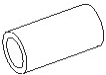
The Comparative Specifications of Product(cont.)

Item		NS052SDXEA/RC052DHXEA	DH052EAV1/UH052EAV1(Basic)
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	29.5kg	29.5kg
	Outdoor Unit	38.5kg	38.5kg
Outer Dimension (WxHtxD)	Indoor Unit	900*260*480 mm	900*260*480mm
	Outdoor Unit	790x548x285mm	790x548x285mm
Noise	Indoor Unit	45dB↓	45dB↓
	Outdoor Unit	58dB↓	58dB↓

The Comparative Specifications of Product(cont.)

Item		NS071CDXEA/RC071DHXEA	DH070EAV1/UH070EAV2(Basic)
Design	Indoor Unit		
	Outdoor Unit		
Net Weight	Indoor Unit	33.0kg	33.0kg
	Outdoor Unit	54.5kg	54.5kg
Outer Dimension (WxHtxD)	Indoor Unit	1150*480*260mm	1150*480*260mm
	Outdoor Unit	880*310*798mm	880*310*798mm
Noise	Indoor Unit	45dB↓	45dB↓
	Outdoor Unit	60dB↓	60dB↓

2-4 Accessory and Specifications

Item	Descriptions	Code-No.	Q'TY	Remark
	Wired remote controller	DB97-15070D	1	
	Owner's Manual	DB98-32657A	1	
	Installation Manual	DB98-32737A	1	
	Insulation	DB62-04318S	1	
	Insu Drain Hose	DB62-11028A	1	Indoor Unit
	Insu Hose	DB62-11208E	1	
		DB62-11208D	1	
	Cable Tie	DB65-10088C	8	
	Grommet Hanger	DB63-00237A	8	
	Ass'y Drain Hose Joint	DB94-03287A	1	
	RUBBER LEG	DB73-20134A	4	
	DRAIN PLUG	DB67-20011A	1	Outdoor unit
	INSTALLATION MANUAL	DB98-34367A	1	

3. Disassembly and Reassembly

■ **Necessary Tools**

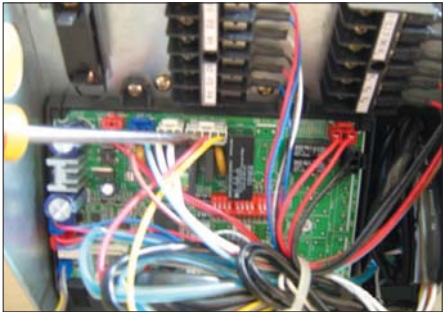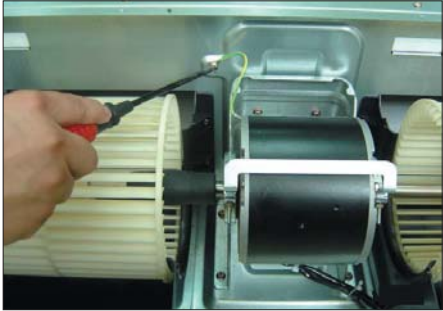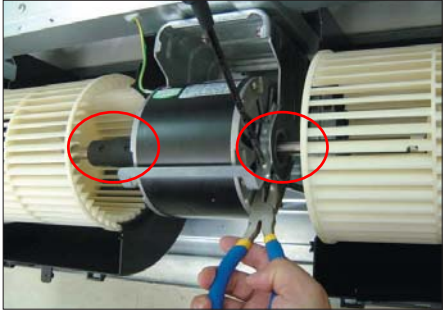| Item	Remark
+SCREW DRIVER	
MONKEY SPANNER	
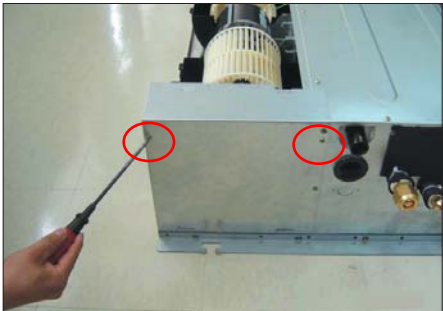
3-1 Indoor Unit

Stop operation of the air conditioner and remove the power cord before repairing the unit.

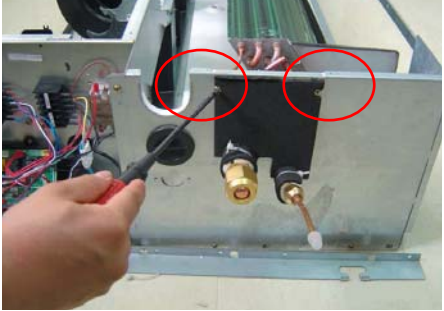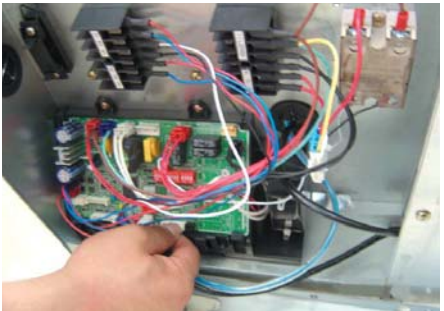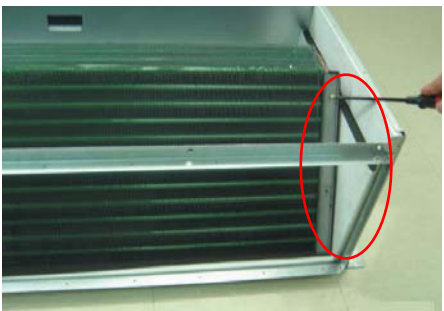## ■ NS035/052/071LDXEA
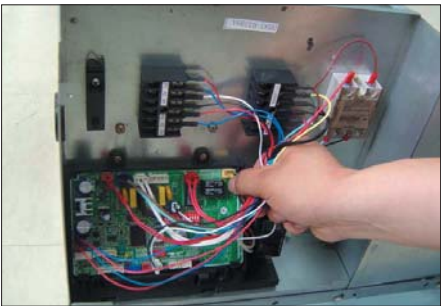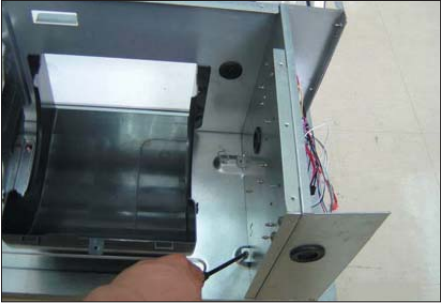
No	Parts	Procedure	Remark
1	Filter	1) Pull out the Filter as picture 1 or picture 2. 2) If it is necessary, after disassembling 8 indicating screws, detach the Bracket Filter.	
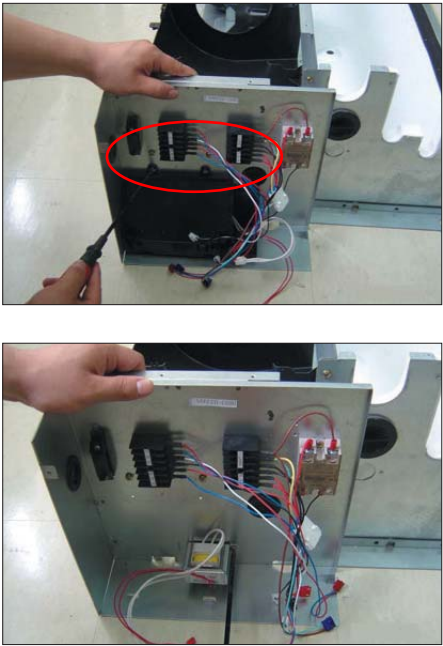
No	Parts	Procedure	Remark
		3) If the Cabinet-Top Motor is assembled on the side of the set, the procedure of disassembling the Filter is just as the above.	
2	Blower & Motor	1) After disassembling 13 indicating screws, detach Ass'y Cabinet-Top Motor.	
		2) After disassembling 3 indicating screws, detach Ass'y Case Blower Upper.	
		– Press the pothook of the Case Blower and detach Ass'y Case Blower Upper.	

No	Parts	Procedure	Remark
		3) After disassembling 2 indicating screws, detach the Cover Control.	
		4) Detach the Motor Wire Connected to PCB and Capacitor.	
		5) After disassembling the indicating screws, detach the wire connected to the Partition.	
		6) After disassembling 2 indicating screws, detach the Ass'y Band Motor.	
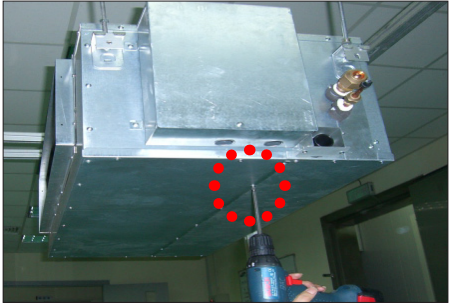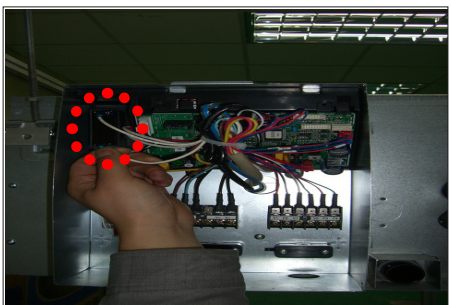
No	Parts	Procedure	Remark
		7) After disassembling the Motor and Blowers, detach the Blowers from the axis of the Motor by 3mm inner hexagon spanner.	
3	Drain Pan	1) After disassembling 15 indicating screws, detach Ass'y Cabinet-Top Evap.	
		2) After disassembling 6 indicating screws, detach the Bracket Outlet.	
		3) Detach the Drain Pan.	
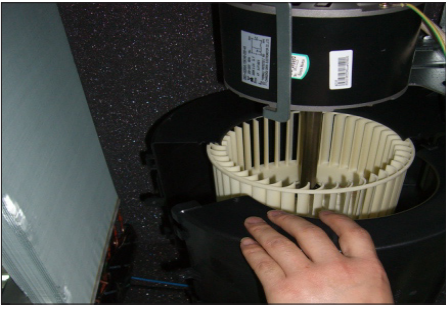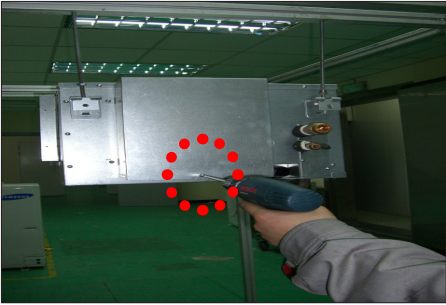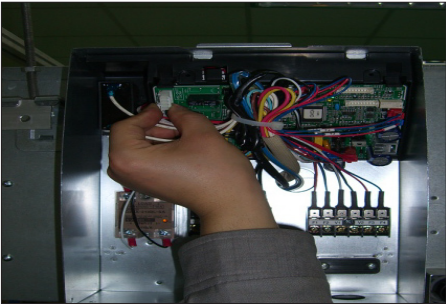
No	Parts	Procedure	Remark
4	Evaporator	✳ After finished the procedures above, detach the Evaporator. 1) After disassembling 2 indicating screws, detach Ass'y Cover Pipe.	
		2) Detach the Sensor from the Control Box.(including 2 Sensors)	
		3) After disassembling 2 indicating screws, detach Ass'y Support Evap LF.	
		4) After disassembling 2 indicating screws, detach Ass'y Support Evap RH.	
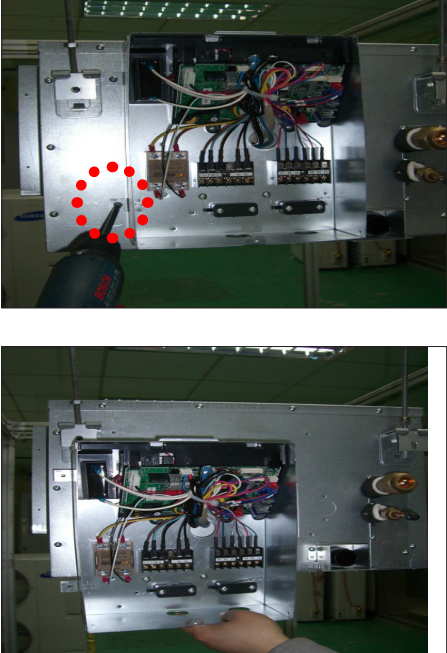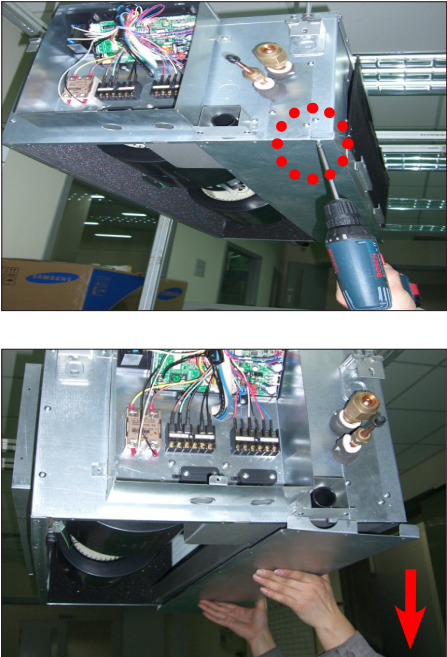
No	Parts	Procedure	Remark
		5) Detach the Evaporator from the set.	
5	Control In	✳ Detach the parts of Control In after disassembling the Cover Control. 1) Detach all the wires connected to the PCB.	
		2) If only the disassembly of PCB required, press the Pothook and detach the PCB from the set.	
		3) If only the disassembly of Capacitor is required, detach it from the set.	
		4) If only the disassembly of Case Control is required, detach it from the set after disassembling 2 indicating screws.	
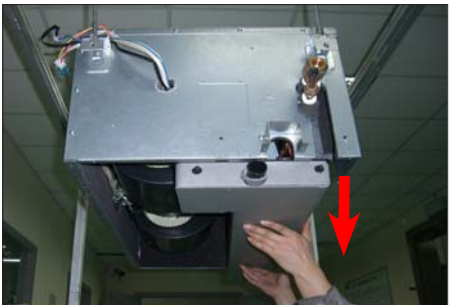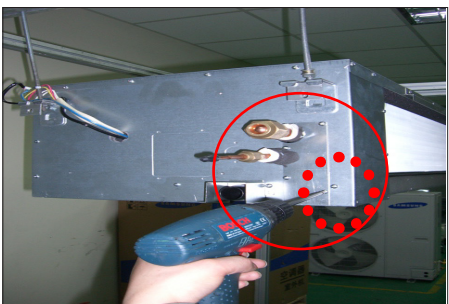
No	Parts	Procedure	Remark
		5) Detach the Transformer after disassembling 2 indicating screws. ✳ Work is possible after disassembling the Case PCB.	
6	Ass'y Bracket Outlet	1) After disassembling 16 indicating screws, detach Ass'y Bracket Outlet.	
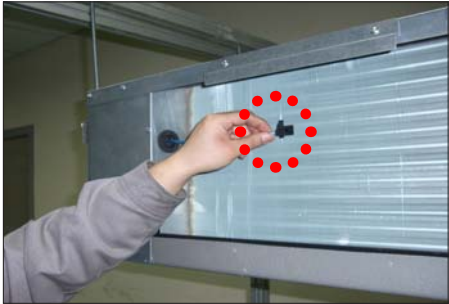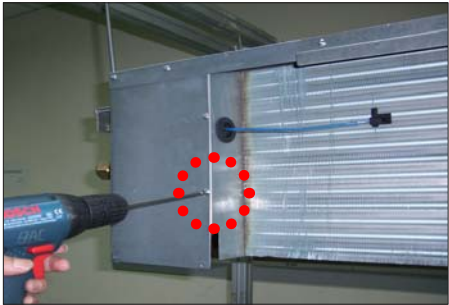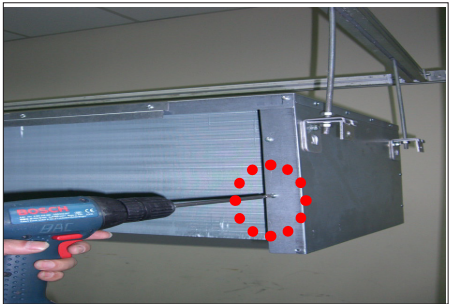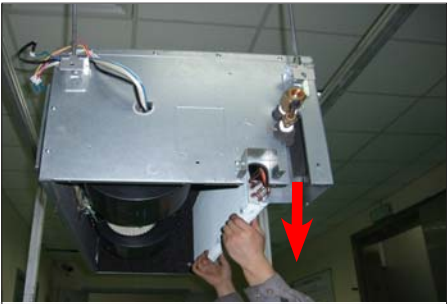
■ NS052/071SDXEA

No	Parts	Procedure	Remark
1	Blower & Motor	1) After disassembling 16 places indicating screws, detach Ass'y Cabi Bottom Blower.	
		2) Detach from Ass'y Control In the capacitor connection wire between the Motor Fan and housing connector.	
		3) After disassembling 2 places indicating screws, detach the 2 Fan Case.	

No	Parts	Procedure	Remark
		4) After disassembling 2 places indicating screws, detach Fan Motor and Blower from the set.	
2	Control In	1) After disassembling 1 Indicating screw, detach the Cover control. 2) Detach the Motor-Fan and Sensor Connector from the PCB.	
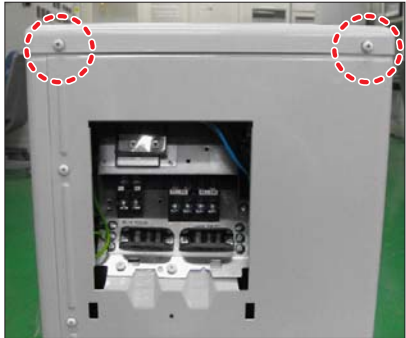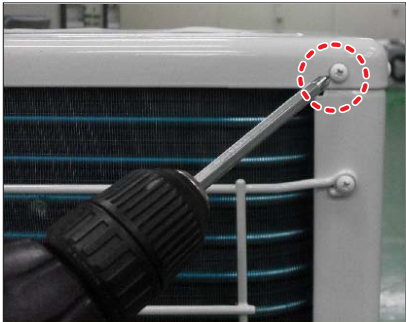
No	Parts	Procedure	Remark
		3) Disassemble 4 indicating screws and detach Control In from the set.	
3	Drain Pan	Work is possible when Disassembling the Ass'y Cabi Bottom Blower. 1) Disassemble 7 indicating screws and detach Ass'y Cabi Bottom Drain.	
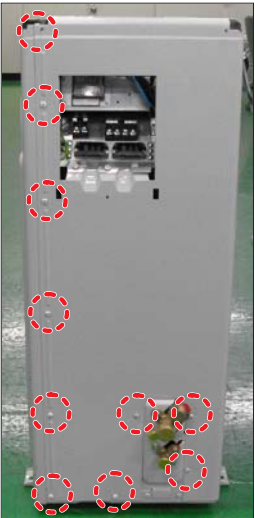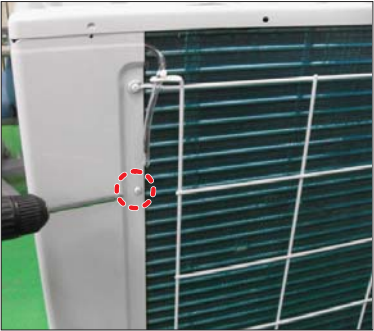
No	Parts	Procedure	Remark
		2) Disassemble 4 indicating screws and detach the Drain Pan. (2 screws each at left and right side)	
4	Evap	Work is possible when Disassembling the Ass'y Drain Pan. 1) Disassemble 5 indicating screws to detach Cover Pipe.	
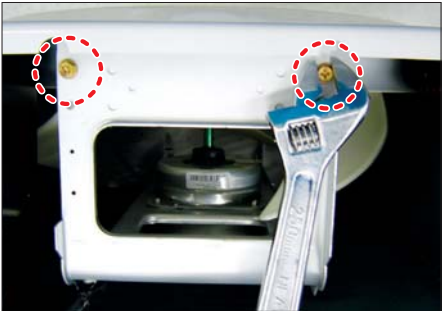
No	Parts	Procedure	Remark
		2) Disassemble Sensor on the Evap.	
		3) Disassemble 4 indicating screws which are in the near of Hanger Plate to detach the Evap. (2 screws each at left and right side) ⚠ It needs 2 peoples.	
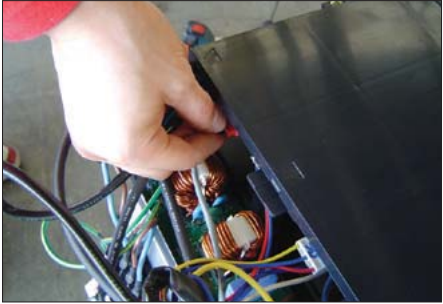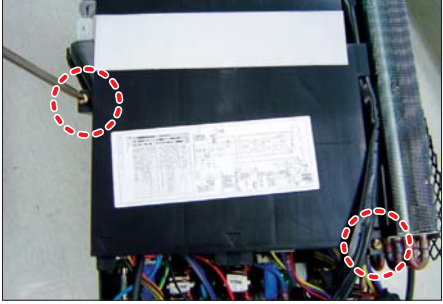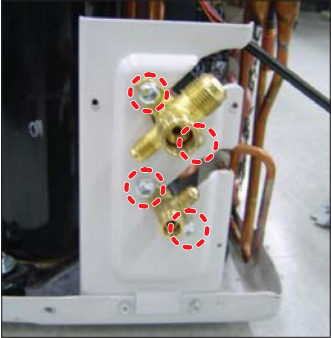
3-2 Outdoor Unit
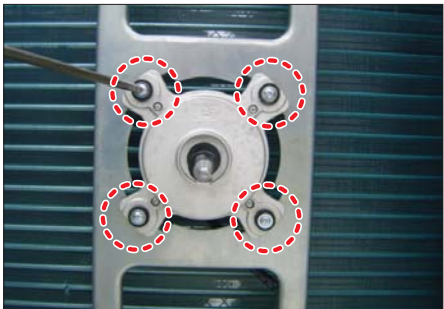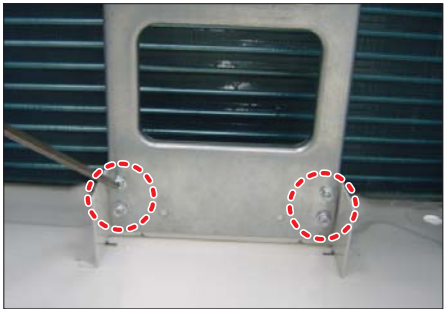
■ RC071DHXEA
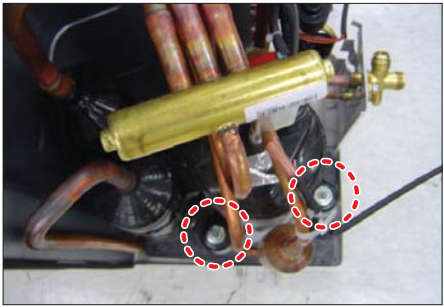
No	Parts	Procedure	Remark
1	Common Work	1) Loosen 1 fixing screw of the Cover-Control and detach the Cover Control. 2) Loosen each 7 fixing screws and detach the Cabinet Upper.	

No	Parts	Procedure	Remark
		3) Loosen 2 screws fixed to assemble Control Box with Cabinet-Side RH.	
		4) Loosen fixing screws and detach the Cabinet-Side RH.	
		5) Loosen 2 screws fixed on the Guide Condenser.	
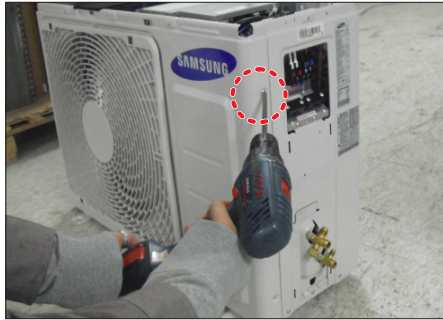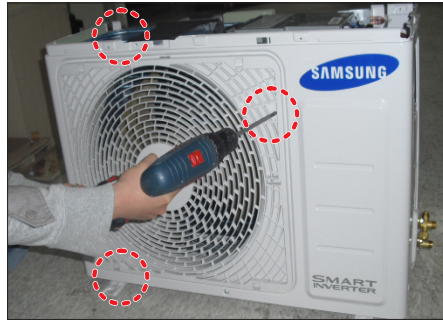
No	Parts	Procedure	Remark
		6) Loosen fixing screws of the Cabinet Front.	
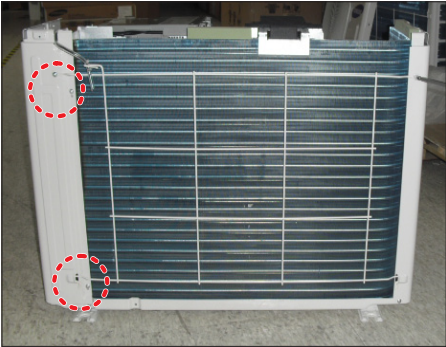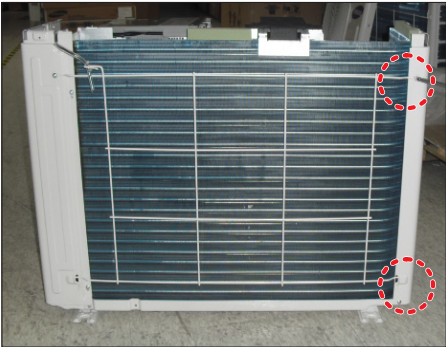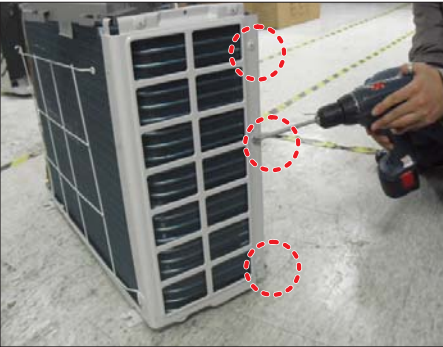
No	Parts	Procedure	Remark
3	ASS'Y Control Out	1) Detach several connectors from the ASS'Y Control Out. 2) Detach several connectors from the PCB of ASS'Y Control Out. 3) Pull up the ASS'Y Control Out.	
4	Heat Exchanger	1) Release the refrigerant at first. 2) Loosen fixing screw on both sides. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger. 5) Loosen 4 bolts fixed to assemble Valve Service with Bracket Valve like the picture on the right side.	

No	Parts	Procedure	Remark
2	Fan & Motor	1) Detach the Nut Flange like the picture on the right side. (Turn counter clockwise because the screw is right-handed.)	
		2) Detach the Fan Propeller. 3) Loosen 4 fixing screws to detach the Motor.	
		4) Disconnect the wire between ASS'Y Control Out and Motor.	
		5) Loosen 2 fixing bolts and detach the Bracket Motor.	
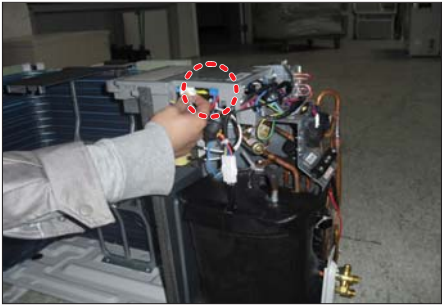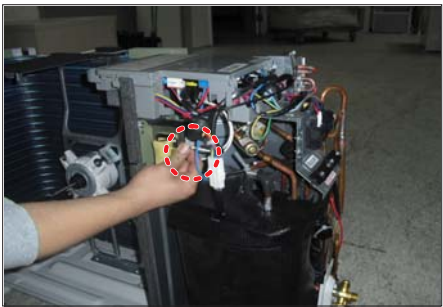
No	Parts	Procedure	Remark
5	Compressor	1) Loosen the fixing nut and detach the Compressor Lead Wire. 2) Disassemble the Felt Compressor Sound. 3) Loosen the 3 bolts at the bottom of Compressor like the picture on the right side.	

■ RC026DHXEA/ RC035DHXEA/ RC052DHXEA

No	Parts	Procedure	Remark
1	common work	1) loosen 1 pcs screw of cover control,and detach it.	
		2) loosen 5 pcs screws on both right and left cabniet side edges and to detach the cover-top	
		3) Loosen 7 screwsfixed to disassemble cabi-front , and detach it.	

No	Parts	Procedure	Remark
	common work	4) loosen 7 screws to disassemble the cabi-right ,and detach it.	
		5) loosen 2 screws to disassemble steel-bar.	
		6) loosen 3 screws to disassemble cabi-left.	

No	Parts	Procedure	Remark
2	fan&motor	1) loosen 1 screw as indication and detached the fan. 2) loosen 4 pcs motor screws and disconnect the wire betwwen assy control out and motor. 3) loosen 2 pcs bracket-motor screw and detach it.	

No	Parts	Procedure	Remark
3	assy control out	1) lossen fixing 1 screw from cover -control 2) detach several connections from assy control out, take out assy control out.	
4	Heat exchanger	1) Release the refrigerant at first 2) Looosen fixing screw on both side. 3) disaessembly the pipes in both inlet and outlet with welding torch. 4) detach the heat exchanger.	

No	Parts	Procedure	Remark
5	compressor	1) disconnect the compressor lead wire . 2)disassembly the felt comp sound. loosen the 3 bolts at the bottom of	

4. Troubleshooting

4-1 Indoor Display Error and Check Method

■ Error detection and reoperation

◆ If error occurs during the operation, badness is indicated by LED flickering and all operation is stopped except LED.

◆ When reoperating by remote control and switch determine the error mode after normal operation.

■ Indoor unit LED lamp display at error detecting

Error type	LED lamp display					Remarks
	Operation ⏻	Defrost ❄	Timer ⏲	Air flow ❄	Filter ▦	
Power reset	◑	X	X	X	X	
Error of temperature sensor in the indoor unit(Open/Short)	X	X	◑	X	X	
Error of heat exchanger sensor in the indoor unit	◑	X	◑	X	X	
Error of the outdoor temperature sensor Error of the condensor temperature sensor Error of the discharge temperature sensor	◑	X	X	◑	X	
1. No communication for 2 minutes between indoor units (Communication error for more than 2 minutes) 2. Indoor unit receiving the communication error from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. When sending the communication error from the outdoor unit, the mismatching of the communication numbers and installed numbers after completion of tracking (Communication error for more than 2 minutes)	X	X	◑	◑	X	
1. Error of electronic expansion valve close 2. Error of electronic expansion valve open 3. 2'nd detection of high temperature cond 4. 2'nd detection of high temperature discharge 5. Error of reverse phase 6. Compressor down due to 6'th detection of freezing	X	X	◑	◑	◑	
Detection of the float switch	X	X	X	◑	◑	
Error of setting option switches for optional accessories	X	X	◑	X	◑	
EEPROM option error	◑	◑	◑	◑	◑	

● : On, ◑ : Flickering, X : OFF

※ If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

■ Wired Remocon Error Display

- If an error occurs, 🔧 is displayed on the wired remote controller.
  If you would like to see an error code, press the Test button.

Display	Explanation	Remark
101	Indoor unit Communication Error	Communication Error
102	Indoor/Outdoor unit Communication Time Out Error 60 Packet Over data	
201	Indoor unit is not connected	
203	Communication Error between Outdoor Main and Inverter Micom (Occurred after 1 minute detection in Main and Inverter)	
121	Indoor Temp. Sensor(Open/Short Error)	Indoor Sensor Error
122	Indoor Unit Eva in Sensor(Open/Short Error)	
128	Indoor Unit Eva in Sensor Separation	
221	Outdoor Temp. Sensor Error(Open/Short Error)	Outdoor Sensor Error
231	COND Temp. Sensor Error(Open/Short Error)	
251	Inverter Compressor Discharge Temp. sensor Error(Open/Short Error)	
425	Power cable miss connection error	
153	Indoor Float Switch 2nd Detection	Self Diagnosys Error
460	Outdoor unit - indoor unit communication wire miss connection (Connected to Power terminal)	
554	Outdoor unit refrigerant Full leakage(Gas leak)	
458	Outdoor Fan 1 Error	
475	Outdoor Fan 2 Error	
416	Discharge over temperature	Outdoor Unit Protetion Control Error
461	[Inverter] Compressor starting error	
462	Primary Current Over Trip error	
464	[Inverter]IPM Over Current(O.C)	
467	[Inverter] Compressor Rotation error	
468	[Inverter] Current Sensor error	
469	[Inverter] DC LINK Sensor error	
471	[Inverter] EEPROM Read/Write Error	

Display	Explanation	Remark
404	[Inverter] Heatsink temperature over Error	Outdoor Unit Protetion Control Error
556	Outdoor unit Capacity Setup option error	
601	Communication error between Indoor unit and wired remote control	Wired remote control error
602	Communication error between Master and Slave wired remote control	
606	COM1/COM2 Cross-installed error	
8EA	Error of setting option for wired remote control COM2	

4-2 Outdoor Unit Error Display

If an error occurs during the operation, it is displayed on the outdoor unit PCB LED, both MAIN PCB and INVERTER PCB.

No.	Error Code	Meaning	Remarks
1	**E201**	Unit quantity miss matching between indoor and outdoor.	Check indoor quantity setting in outdoor (Refer to page 17.)
2	**E202**	Abnormal state, no communication between Indoor and Outdoor Main PCB	Check electrical connection and setting
3	**E203**	1min. Time out of communcation error(Main↔Inverter)	Check electrical connection and setting
4	**E221**	Outdoor temp sensor error	Check Outdoor sensor Open/Short
5	**E231**	Cond. temp sensor error	Check Cond. sensor Open/Short
6	**E251**	Discharge temp sensor error	Check Discharge sensor Open/Short
7	**E320**	OLP Sensor Error	Check OLP sensor Open/Short
8	**E403**	Detection of Outdoor Freezing when Comp. Stop	Check Outdoor Cond.
9	**E404**	Protection of Outdoor Overload when Comp. Stop	Check Comp. when it start
10	**E416**	Discharge temperature of a compressor in an outdoor unit is overheated.	
11	**E440**	Heating operation is not available since the outdoor air temperature is over 30℃.	Heating
	E441	Cooling operation is not available since the outdoor air temperature is lower than -5℃.	Cooling
12	**E458**	Outdoor unit BLDC Fan 1 or Fan 2 error	FAN1 error
	E475		FAN2 error
13	**E461**	Comp. Starting error	
14	**E462**	Primary Current Trip error	
15	**E463**	Over current trip / PFC over current error	Check OLP sensor
16	**E464**	IPM(IGBT Module) Over Current(O.C)	
17	**E465**	Comp. Over load error	
18	**E466**	DC-Link voltage under/over error	Check AC Power or DC_Link voltage
19	**E467**	Comp. wire missing error	Check Comp. wire
20	**E468**	Current sensor error	Check Outdoor Inverter PBA
21	**E471**	Outdoor EEPROM error	Check Outdoor EEPROM date
22	**E474**	IPM(IGBT Module) or PFCM Temperature sensor Error	Check Outdoor Inverter PBA
23	**E484**	PFC Overload Error	Check Outdoor Inverter PBA
24	**E500**	IPM is over heated.	Check Outdoor Inverter PBA
25	**E554**	GAS Leak error	Check indoor and outdoor unit model
26	**E556**	Capacity miss match between indoor and outdoor	Check indoor and outdoor unit model

4-3 Setting Option Setup Method

4-3-1 Type A (Setting Option)

Option No. : ⊡45770 - 1⊏8000

Step 1 : **Enter the Option Setup mode.**

    1st   Take out the batteries of remote control.

    2nd Press the temperature ⊕ button simultaneously and
         insert the battery again.

    3rd Make sure the remocon display shown as ⊟⊟ .
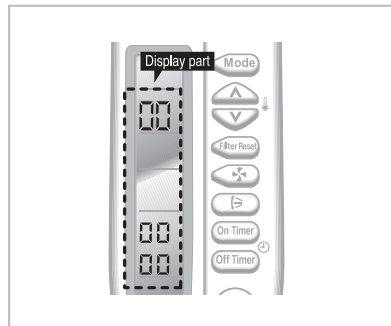
Step 2 : **Enter the Option Setup mode and select your option according to the following procedure.**

1
The default value is 88 .
Otherwise, push the (Mode) button to ⊡ .
Every time you push the button, the display panel reads 1 or ⊡
repeatedly.

2
Push the ⌃ button to set the display panel to 4 .
Every time you push the button, the display panel reads ⊡ ➡ 1 ➡ 2
➡ 3 ➡ … 9 ➡ Я ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

3
Push the ⌄ button to set the display panel to 5 .
Every time you push the button, the display panel reads ⊡ ➡ 1 ➡ 2
➡ 3 ➡ … 9 ➡ Я ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

4
Push the ⊛ button to set the display panel to 7.
Every time you push the button, the display panel reads ⊡ ➡ 1 ➡ 2
➡ 3 ➡ … 9 ➡ Я ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

5
Push the (On Timer) button to set the display panel to 7.
Every time you push the button, the display panel reads ⊡ ➡ 1 ➡ 2
➡ 3 ➡ … 9 ➡ Я ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

6
Push the (Off Timer) button to set the display panel to ⊡ .
Every time you push the button, the display panel reads ⊡ ➡ 1 ➡ 2
➡ 3 ➡ … 9 ➡ Я ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.
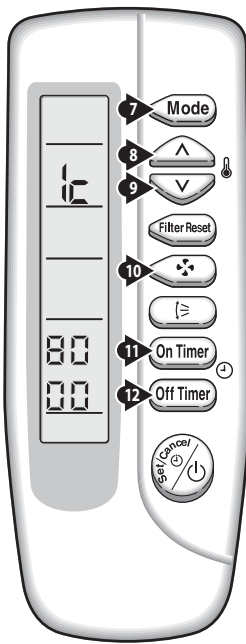
S Setting is not required if you must ⊡
  a value which has a ⊡ default.

7	Press ⬭Mode button, then the default value is ⌗⌗ .
8	Push the ⬭︎ button to set the display panel to ⊂ . Every time you push the button, the display panel reads 𝟢 ➡ 𝟣 ➡ 𝟤 ➡ 𝟥 ➡ … 𝟫 ➡ 𝐴 ➡ 𝑏 ➡ ⊂ ➡ 𝑑 ➡ 𝐸 ➡ 𝐹 repeatedly.
9	Push the ⬭︎ button to set the display panel to 𝟪 . Every time you push the button, the display panel reads 𝟢 ➡ 𝟣 ➡ 𝟤 ➡ 𝟥 ➡ … 𝟫 ➡ 𝐴 ➡ 𝑏 ➡ ⊂ ➡ 𝑑 ➡ 𝐸 ➡ 𝐹 repeatedly.
10	Push the ⬭︎ button to set the display panel to 𝟢 . Every time you push the button, the display panel reads 𝟢 ➡ 𝟣 ➡ 𝟤 ➡ 𝟥 ➡ … 𝟫 ➡ 𝐴 ➡ 𝑏 ➡ ⊂ ➡ 𝑑 ➡ 𝐸 ➡ 𝐹 repeatedly.
11	Push the (On Timer) button to set the display panel to 𝟢 . Every time you push the button, the display panel reads 𝟢 ➡ 𝟣 ➡ 𝟤 ➡ 𝟥 ➡ … 𝟫 ➡ 𝐴 ➡ 𝑏 ➡ ⊂ ➡ 𝑑 ➡ 𝐸 ➡ 𝐹 repeatedly.
12	Push the (Off Timer) button to set the display panel to 𝟢 . Every time you push the button, the display panel reads 𝟢 ➡ 𝟣 ➡ 𝟤 ➡ 𝟥 ➡ … 𝟫 ➡ 𝐴 ➡ 𝑏 ➡ ⊂ ➡ 𝑑 ➡ 𝐸 ➡ 𝐹 repeatedly.

S Setting is not required if you must 𝟢
   a value which has a 𝟢 default.

Step 3 : Upon completion of the selection, check you made right selections.

Press the Mode Selection key, ⬭Mode to set the display part to 𝟢 and check the display part.

➡ The display part shows 𝟢𝟦 / 𝟧𝟩 / 𝟣𝟢 .

Press the Mode Selection key, ⬭Mode set the display part to 𝟣 and check the display part.

➡ The display part shows 𝟣⊂ / 𝟪𝟢 / 𝟢𝟢 .

Step 4 : Pressing the ON/OFF button(✍)

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound ''Ding'' or ''Diriring''
is heard and the OPERATION ICON(⏻) lamp of the display is flickering at the same time, then the input of option is completed.
(If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote control.
Second, Re-insert the battery into the remote control.
Third, Press ON/OFF button(✍) with the direction of remote control for set.
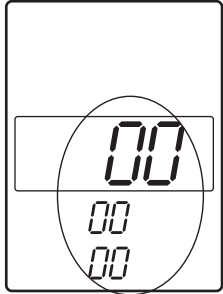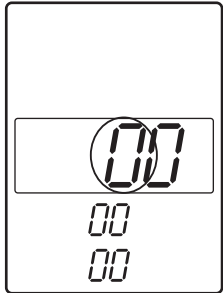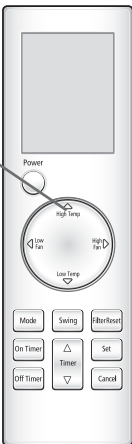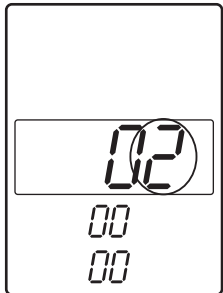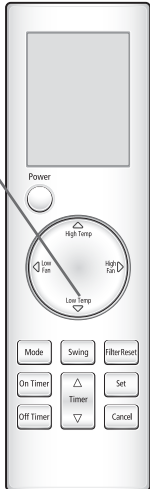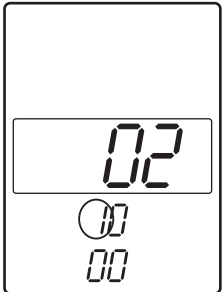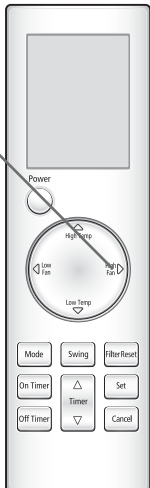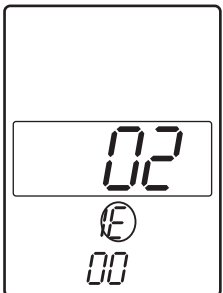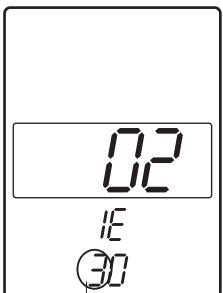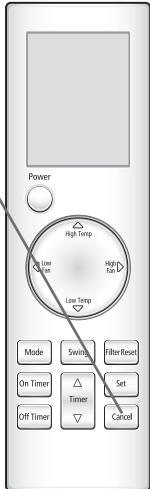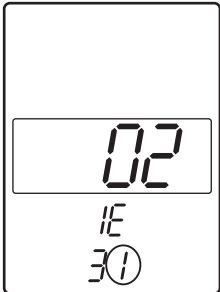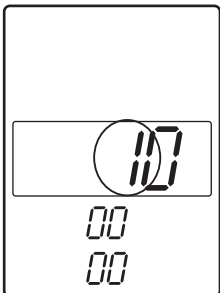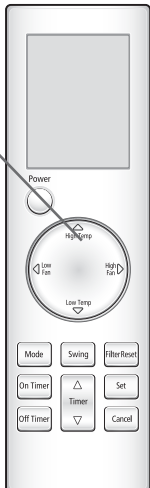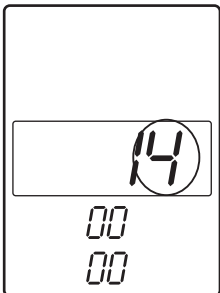
• Error Mode
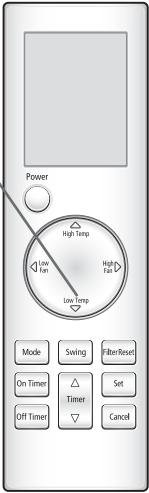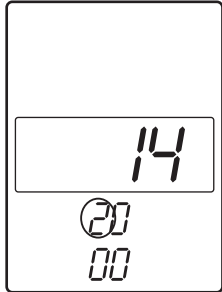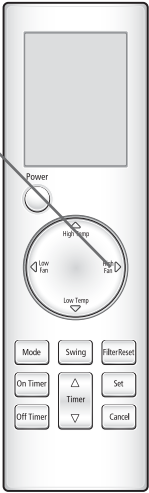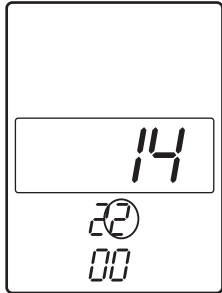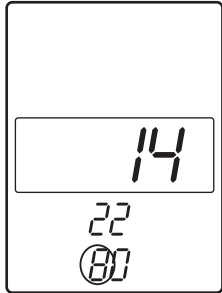
1st   If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.

2nd   If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the
         correct option code is set up for its model.
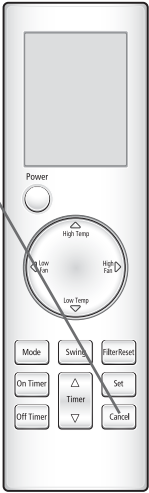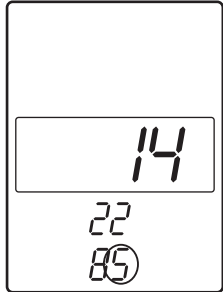
4-3-2 Type B(Setting Option Setup Method)
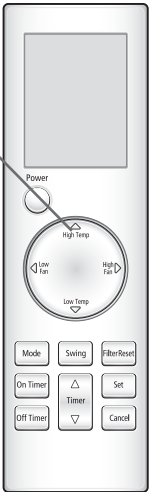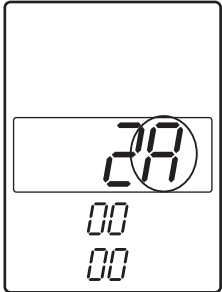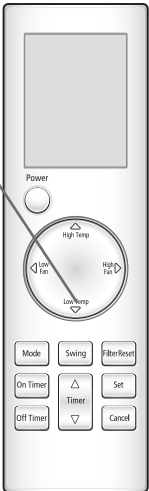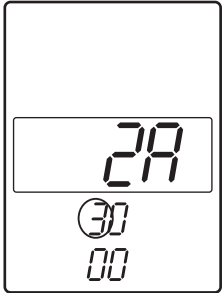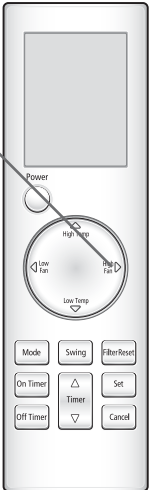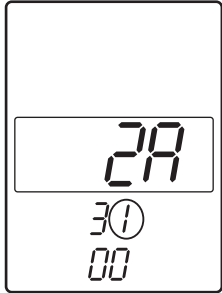
Operation method	Applicable button	Indicating state
❈ **Step 1** Method) ① Remove the battery of remote controller. ② Push the Off Timer and Cancel button simultaneously. ③Insert the battery. Result) When the display of remote controller is indicated as shown in the right, then go to the step 2.		
❈ **Step 2** Method) If the first digit of remote controller shows "0", go to the step 3. • If it shows 1, press the Mode button one time to change it into 0 and then go to step 3.		
❈ **Step 3** Method) Input the second digit of option code by pressing the High Temp button. example) 0**2**1E311422852A311439421F Result) If 2 is displayed, go to the step 4 (whenever pressing the button, 1~9, A,B,C,D,E,F are lit in order.)		
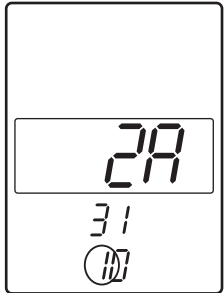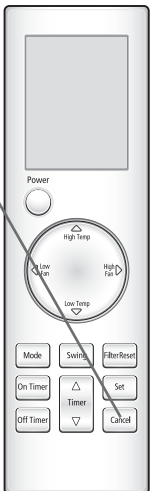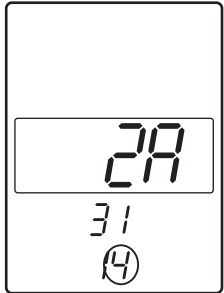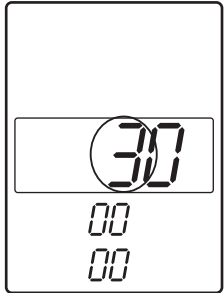
Operation method	Applicable button	Indicating state
❊**Step 4** Method) Input the third digit of option code by pressing the Low Temp button. example) 02**1**E311422852A311439421F Result) If 1 is displayed, go to the step 5.		
❊ **Step 5** Method) Input the fourth digit of option code by pressing the High Fan button. example) 021**E**311422852A311439421F Result) If E displays, go to step 6.		
❊ **Step 6** Method) Input the fifth digit of option code by pressing the On Timer button. example) 021E**3**11422852A311439421F Result) If 3 displays, go to step 7.		**SEG5**
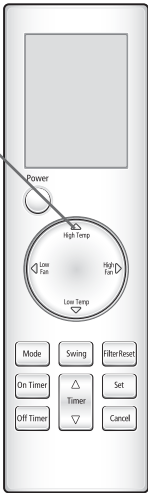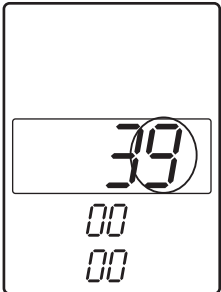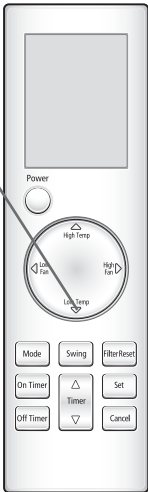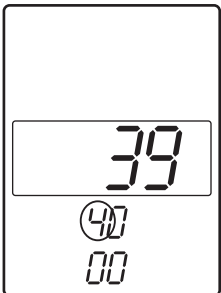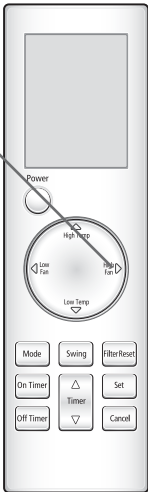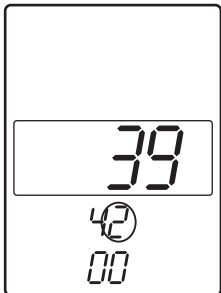
Operation method	Applicable button	Indicating state
❄ **Step 7** Method) Input the sixth digit by pressing the Cancel button. example) 021E3**1**1422852A311439421F Result) If 1 displays, go to step 8.		
❄ **Step 8** Method) After completion up to step 7, pressing Mode button. ① 1~7 steps are saved internally. ② If the first number is 1 at the time, it is correct. So go to step 9. • If wanting to see the screen of 2~7 steps, press the mode button repeatedly to make the first digit 0.		
❄**Step 9** Method) Input the eighth digit by pressing the High Temp button. example) 021E311**4**22852A311439421F Result) If 4 displays, go to step 10.		
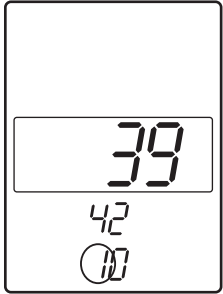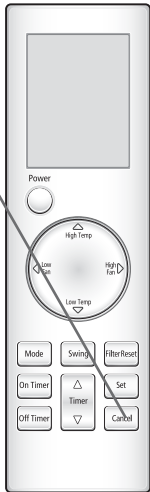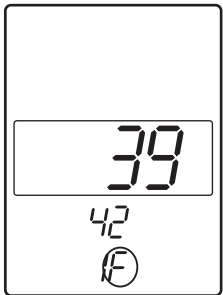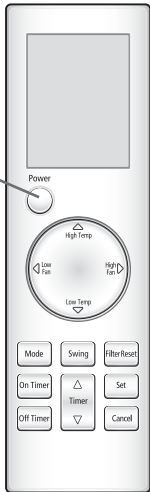
Operation method	Applicable button	Indicating state
❄ **Step 10** Method) Input the ninth digit by pressing the Low Temp button. example) 021E3114**2**2852A311439421F Result) If 2 displays, go to step 11.		
❄**Step 11** Method) Input the tenth digit by pressing the High Fan button. example) 021E31142**2**852A311439421F Result) If 2 displays, go to step 12.		
❄**Step 12** Method) Input the 11st digit by pressing the On Timer button. example) 021E311422**8**52A311439421F Result) If 8 displays, go to step 13.		
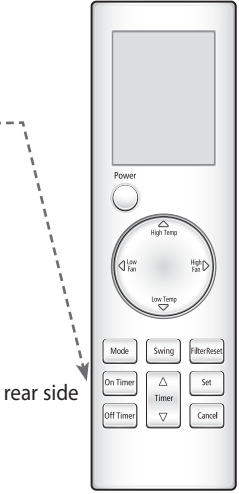
Operation method	Applicable button	Indicating state
❈ **Step 13** Method) Input the 12th digit by pressing the Cancel button. example) 021E3114228**5**2A311439421F Result) If 5 displays, go to step 14.		
❈ **Step 14** Method) After completion up to step 13, pressing Mode button. ① Previous steps are saved internally. ② If the first number is 2 at the time, it is correct. So go to step 15. • If wanting to see previous screen, press the mode button repeatedly to make the first digit to with digit.		▣ **Error** ① If the On/Off, Timer and Fan indicator is flickering, the wrong option code is input. Put off the power of indoor unit and turn it on again and then input the option code again. If the same error occurs, it is the EEPROM is defective or not inserted. Replace the PCB. ② If all of On/Off, Timer, Fan and Filter Sign indicator are flickering along with the "Tiriring" sound, there is option code already input which are different from the current ones. Check the option code and press the button again if correct. Option code will be input.(Check the option code correctly. At the time, if the same error continues to occur, the option code is out of input range. Check the option code again and repeat the step 1~14.

Operation method	Applicable button	Indicating state
❄ **Step 15** Method) Input the 14th digit by pressing the High Temp button. example) 021E311422852**A**311439421F Result) If A displays, go to step 16.		
❄ **Step 16** Method) Input the 15th digit by pressing the Low Temp button. example) 021E311422852A**3**11439421F Result) If 3 displays, go to step 17.		
❄ **Step 17** Method) Input the 16th digit by pressing the High Fan button. example) 021E311422852A3**1**1439421F Result) If 1 displays, go to step 18.		

Operation method	Applicable button	Indicating state
❋ **Step 18** Method) Input the 17th digit by pressing the On Timer button. example) 021E311422852A31**1**439421F Result) If 1 displays, go to step 19.		
❖ **Step 19** Method) Input the 18th digit by pressing the Cancel button. example) 021E311422852A311**4**39421F Result) If 4 displays, go to step 20.		
❋ **Step 20** Method) After completion up to step 20, pressing Mode button. ① Previous steps are saved internally. ② If the first number is 3 of the time, it is correct. so go to step 22. • If wanting to see previous screen, press the mode button repeatedly to make the first digit to with digit.		

Operation method	Applicable button	Indicating state
❄ **Step 21** Method) Input the 20th digit by pressing the High Temp button. example) 021E311422852A311439421F Result) If 9 displays, go to step 22.		
❄ **Step 22** Method) Input the 21th digit by pressing the Low Temp button. example) 021E311422852A311439421F Result) If 4 displays, go to step 23.		
❖ **Step 23** Method) Input the 22th digit by pressing the High Fan button. example) 021E311422852A311439421F Result) If 2 displays, go to step 24.		

Operation method	Applicable button	Indicating state

❋ **Step 24**
 	
  Method)
  Input the 23th digit by pressing the
  On Timer button.
  example) 021E311422852A311439421F
 	
  Result)
  If 1 displays, go to step 25.
		
		39
		42
		1D

❋ **Step 25**
 	
  Method)
  Input the 24th digit by pressing the
  Cancel button.
  example) 021E311422852A311439421**F**
 	
  Result)
  If F displays, go to step 26.
		
		39
		42
		F

❋ **Step 26**
 	
  Method)
  Turn the remote controller toward the indoor
  unit and press the Power button,   and if the
  "Ting" or "Tiriring" sounds, the input of option is
  completed.
  • If error displays, solve the
    problem with reference to the   right side.
		Error
		① If the On/Off, Timer and Fan
		  indicator is flickering, the wrong option
		  code is input. Put off the power of
		  indoor unit and turn it on again and
		  then input the option code again.
		   If the same error occurs, it is the
		   EEPROM is defective or not
		   inserted. Replace the PCB.
		
		② If all of On/Off, Timer, Fan and Filter Sign
		  indicator are flickering along with the
		  "Tiriring" sound, there is option code
		  already input which are different from
		  the current ones.
		   Check the option code and press the
		   button again if correct. Option code will
		   be input.(Check the option code
		   correctly. At the time, if the same error
		   continues to occur, the option code is
		   out of input range.
		   Check the option code again and repeat
		   the step 1~26.

Operation method	Applicable button	Indicating state
※ **Step 27** Method) If the steps 1 to 26 are completed, remove the battery and insert it again to return to the original display of remote controller. (Operation mode/SET TEMP. /fan speed displays.) rear side		▣ Error ① If the On/Off, Timer and Fan indicator is flickering, the wrong option code is input. Put off the power of indoor unit and turn it on again and then input the option code again. If the same error occurs, it is the EEPROM is defective or not inserted. Replace the PCB. ② If all of On/Off, Timer, Fan and Filter Sign indicator are flickering along with the "Tiriring" sound, there is option code already input which are different from the current ones. Check the option code and press the button again if correct. Option code will be input.(Check the option code correctly. At the time, if the same error continues to occur, the option code is out of input range. Check the option code again and repeat the step 1~26.

4-3-3 Setting an indoor unit address and installation option
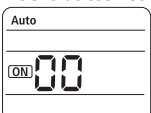
▶ Set the indoor unit address and installation option with remote controller option.
Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time.You need to set twice when setting indoor unit address and installation option.

▶ Please use the proper wireless remocon which can set 24 digit option code. Following is the instructions of setting option code with wireless remocon of MR-DH00. (MR-AH01 can be used for operating but cannot be used for setting the installation option because only 12 digit option setting is available.

▶ Please refer to the wired remocon installation manual for setting with the wired remocon.

4-3-3-1 The procedure of setting option

Entering mode for setting option

High Temp Button
Low Temp Button

Option setting mode

Mode change
High Fan Button
Low Fan Button
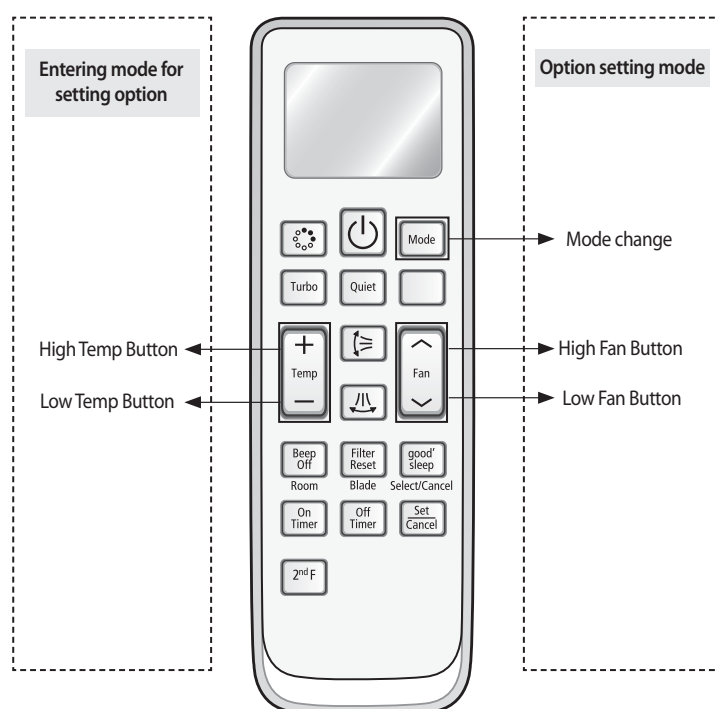
Step 1. Entering mode to set option

1. Remove batteries from the remote controller.
2. Insert batteries and enter the option setting mode while pressing High Temp button and Low Temp button.
3. Check if you have entered the option setting status.

Step 2. The procedure of option setting

After entering the option setting status, select the option as listed below.

> ⚠ **CAUTION**
>
> Option setting is available from SEG1 to SEG 24
> • SEG1, SEG7, SEG13, SEG18 arenot need to be set at MR-DH00. They are the page options which were used at the previous other remocons.
> • Set the each 2 bit option code in order except page options.
> For example : SEG2, 3 → SEG4, 5 → SEG6, 8 → SEG9, 10 → SEG11, 12 → SEG 14, 15 → SEG 16, 17 → SEG 18, 20 → SEG 21, 22 → SEG23, 24.
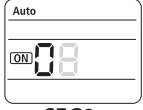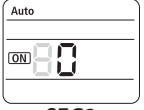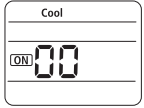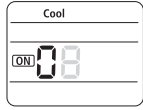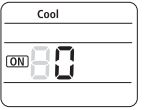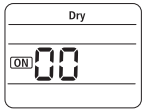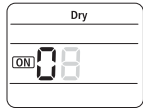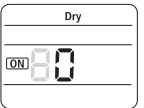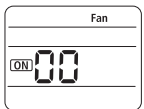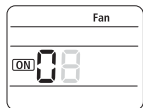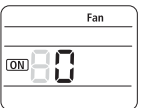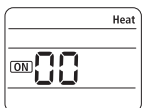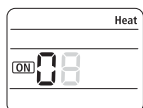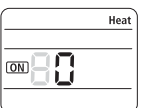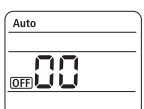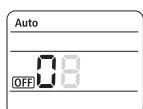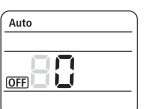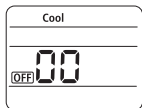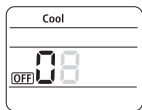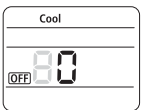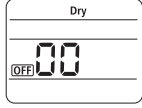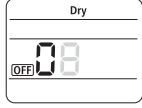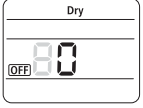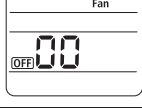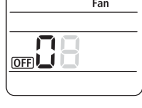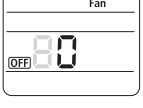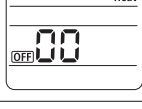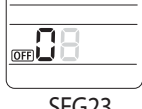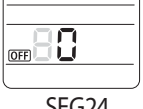
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
0	X	X	X	X	X	1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18	SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
2	X	X	X	X	X	3	X	X	X	X	X

On(SEG1~12)   Off(SEG13~24)

4-3-3-2 The procedure of setting option
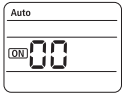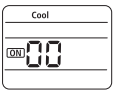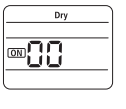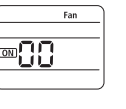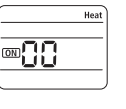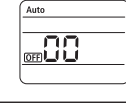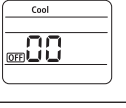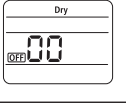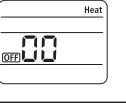
Option setting	Status
1. Setting SEG2, SEG3 option Press Low Fan button(∨) to enter SEG2 value. Press High Fan button(∧) to enter SEG3 value. Each time you press the button, 0→1→···E→ F will be selected in rotation.	Auto ON 08 · Auto ON 80 SEG2 · SEG3
2. Setting Cool mode [Mode] Press Mode button to be changed to Cool mode in the ON status.	Cool ON 00
3. Setting SEG4, SEG5 option Press Low Fan button(∨) to enter SEG4 value. Press High Fan button(∧) to enter SEG5 value. Each time you press the button, 0→1→···E→F will be selected in rotation.	Cool ON 08 · Cool ON 80 SEG4 · SEG5
4. Setting Dry mode [Mode] Press Mode button to be changed to DRY mode in the ON status.	Dry ON 00
5. Setting SEG6, SEG8 option Press Low Fan button(∨) to enter SEG6 value. Press High Fan button(∧) to enter SEG8 value. Each time you press the button, 0→1→···E→F will be selected in rotation.	Dry ON 08 · Dry ON 80 SEG6 · SEG8
6. Setting Fan mode [Mode] Press Mode button to be changed to FAN mode in the ON status.	Fan ON 00
7. Setting SEG9, SEG10 option Press Low Fan button(∨) to enter SEG9 value. Press High Fan button(∧) to enter SEG10 value. Each time you press the button, 0→1→···E→F will be selected in rotation.	Fan ON 08 · Fan ON 80 SEG9 · SEG10
8. Setting Heat mode [Mode] Press Mode button to be changed to HEAT mode in the ON status.	Heat ON 00
9. Setting SEG11, SEG12 option Press Low Fan button(∨) to enter SEG11 value. Press High Fan button(∧) to enter SEG12 value. Each time you press the button, 0→1→···E→F will be selected in rotation.	Heat ON 08 · Heat ON 80 SEG11 · SEG12
10. Setting Auto mode [Mode] Press Mode button to be changed to AUTO mode in the OFF status.	Auto OFF 00
11. Setting SEG14, SEG15 option Press Low Fan button(∨) to enter SEG14 value. Press High Fan button(∧) to enter SEG15 value. Each time you press the button, 0→1→···E→F will be selected in rotation.	Auto OFF 08 · Auto OFF 80 SEG14 · SEG15

The procedure of setting option (cont.)

Option setting	Status
12. Setting Cool mode [Mode] Press Mode button to be change to Cool mode in the OFF status.	Cool (OFF) 00
13. Setting SEG16, SEG17 option Press Low Fan button(∨) to enter SEG16 value. Press High Fan button(∧) to enter SEG17 value. Each time you press the button, 0→1→⋯ E→F will be selected in rotation.	Cool (OFF) 08 Cool (OFF) 80 SEG16 SEG17
14. Setting Dry mode [Mode] Press Mode button to be change to Dry mode in the OFF status.	Dry (OFF) 00
15. Setting SEG18, SEG20 option Press Low Fan button(∨) to enter SEG18 value. Press High Fan button(∧) to enter SEG20 value. Each time you press the button, 0→1→⋯ E→F will be selected in rotation.	Dry (OFF) 08 Dry (OFF) 80 SEG18 SEG20
16. Setting Fan mode [Mode] Press Mode button to be change to Fan mode in the OFF status.	Fan (OFF) 00
17. Setting SEG21, SEG22 option Press Low Fan button(∨) to enter SEG21 value. Press High Fan button(∧) to enter SEG22 value. Each time you press the button, 0→1→⋯ E→F will be selected in rotation.	Fan (OFF) 08 Fan (OFF) 80 SEG21 SEG22
18. Setting Heat mode [Mode] Press Mode button to be change to HEAT mode in the OFF status.	Heat (OFF) 00
19. Setting SEG23, SEG24 mode Press Low Fan button(∨) to enter SEG23 value. Press High Fan button(∧) to enter SEG24 value. Each time you press the button, 0→1→⋯ E→F will be selected in rotation.	Heat (OFF) 08 Heat (OFF) 80 SEG23 SEG24

Step 3. Check the option you have set

After setting option, press [Mode] button to check whether the option code you input is correct or not.

Option	[SEG2,3]	[SEG4,5]	[SEG6,8]	[SEG9,10]	[SEG11,12]
Remote Controller Display	Auto (ON) 00	Cool (ON) 00	Dry (ON) 00	Fan (ON) 00	Heat (ON) 00
Option	[SEG14,15]	[SEG16,17]	[SEG18,20]	[SEG21,22]	[SEG23,24]
Remote Controller Display	Auto (OFF) 00	Cool (OFF) 00	Dry (OFF) 00	Fan (OFF) 00	Heat (OFF) 00

Step 4. Input option

Press operation button [⏻] with the direction of remote control for set.
For the correct option setting, you must input the option twice.

Step 5. Check operation

1. Reset the indoor unit by pressing the RESET button of indoor unit or outdoor unit.
2. Take the batteries out of the remote controller and insert them again and then press the operation button.

4-3-3-3 Setting an indoor unit address (MAIN/RMC)

1. **Check whether power is supplied or not.**
   - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
2. **The panel(display) should be connected to an indoor unit to receive option.**
3. **Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.**
4. **Assign an indoor unit address by wireless remote controller.**

   -The initial indoor unit ADDRESS is set as "MAIN : 0, RMC : 0".
   -Set Main and RMC Address only the setting is required.
   -There is no need to assign the indoor unit Main Address if the outdoor unit is addressing automatically.
   The indoor unit Main address will follow the outdoor unit's automatically.
   -Assign 12 digit when setting the indoor unit address.
   -No need to assign SEG4, 5, 8, 10 which are non applicable. Even though those segments are set, they will be ignored.
   -If you set the applicable segments with numbers other than the indiciated, the initial setting will be maintained.

Option No. : 0AXXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG1		SEG2		SEG3		SEG4	SEG5	SEG6	
Explanation	PAGE		MODE		Setting Main address				The unit digit of an indoor unit	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	RESERVED	RESERVED	Indication	Details
	0		A		0	No Main address			0~3	A single digit
					1	Main address setting mode				

Option	SEG7		SEG8	SEG9		SEG10	SEG11		SEG12	
Explanation	PAGE			Setting RMC address			Group channel(*16)		Group address	
Indication and Details	Indication	Details	RESERVED	Indication	Details	RESERVED	Indication	Details	Indication	Details
	1			0	No RMC address		RMC1	0~2	RMC2	0~F
				1	RMC address setting mode					

⚠ **CAUTION**
- When "A"~"F" is entered to SEG5~6, the indoor unit MAIN ADDRESS is not changed.
- If you set the SEG 3 as 0, the indoor unit will maintain the previous MAIN ADDRESS even if you input the option value of SEG6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG11~12.

Example) If you want to set as "MAIN : 3, CHANNEL : 1, RMC : B",

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	A	1	-	-	3
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	-	1	-	1	B

assign option codes except SEG 1, 7 which are page options.

Auto	Cool	Dry	Fan	Heat
ON A1	ON 00	ON 30	ON 1 0	ON 1 8
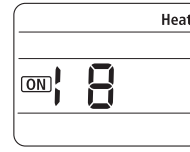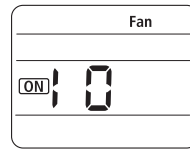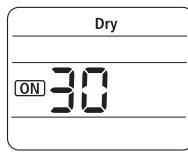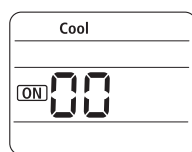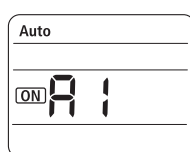
4-3-3-4 Setting an indoor unit installation option (suitable for the condition of each installation location)

1. Check whether power is supplied or not.
   - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.

2. The panel(display) should be connected to an indoor unit to receive option.

3. Set the installation option according to the installation condition of an air conditioner.
   - The default setting of an indoor unit installation option is "02000-100000-200000-300000".
   - Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
   - No need to assign SEG3, 6, 9, 10, 11, 16, 21, 22, 23, 24 which are non applicable. Even though those segments are set, they will be ignored.
   - If you set the applicable segments with numbers other than the indiciated, the initial setting will be maintained.

4. Set the indoor unit option by wireless remote controller.

Option No. : 02XXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG1		SEG2		SEG3	SEG4		SEG5		SEG6
Explanation	PAGE		MODE		RESERVED	Use of external temperature sensor		Use of central control		RPM setting compensation
Indication and Details	Indication	Details	Indication	Details		Indication	Details	Indication	Details	0. Not used 1. High ceiling mode 2. High ceiling kit 3. Low noise operation mode
	0		2			0	Disuse	0	Disuse	
						1	Use	1	Use	

Option	SEG7		SEG8		SEG9	SEG10	SEG11	SEG12	
Explanation	PAGE		Use of drain pump		RESERVED	RESERVED	RESERVED	Master / Slave	
Indication and Details	Indication	Details	Indication	Details				Indication	Details
	1		0	Disuse				0	slave
			1	Use				1	master
			2	Use + 3minute delay					

Option	SEG13		SEG14		SEG15		SEG16		SEG17		SEG18	
Explanation	PAGE		Use of external control		Setting the output of external control		S-Plasma ion		Buzzer control		Number of hours using filter	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	2		0	Disuse	0	Thermo on	0	Disuse	0	Use of buzzer	2	1000 Hour
			1	ON/OFF Control	1	Operation on	1	Use	1	Non use of buzzer	6	2000 Hour
			2	OFF Control								

Option	SEG19		SEG20		SEG21	SEG22	SEG23		SEG24
Explanation	PAGE		Individual control of a remote controller				Motion detect sensor		
	Indication	Details	Indication	Details	RESERVED	RESERVED	Indication	Details	RESERVED
Indication and Details	3		0 or 1	Indoor 1			0.No Use (Factory Setting) 1.Standard Mode/Auto Set OFF30 Min. 2.Standard Mode/Auto Set OFF60 Min. 3.Standard Mode/Auto Set OFF 120 Min. 4.Standard Mode/Auto Set OFF 180 Min. 5.Premium Mode/ Auto Set OFF30 Min.6.Premium Mode/ Auto Set OFF60 Min. 7.Premium Mode/Auto Set OFF 120 Min. 8.Premium Mode/Auto Set OFF 180 Min.		
			2	Indoor 2					
			3	Indoor 3					
			4	Indoor 4					

▶ **If you input a number other than 0~4 on the individual control of the indoor unit(SEG 20), the indoor is set as "Indoor 1".**
Example) If you want to set as "Exterior temperature sensor : USE, External control : USE, Number of hours using filer : 2000hr",

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	-	1	0	-
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	0	-	-	-	0
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	1	0	-	0	6
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	0	-	-	-	-

assign option codes except SEG 1, 7, 13, 19 which are page options.

4-3-3-5 Changing a particular option

You can change each digit of set option.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		The option mode you want to change		The tens' digit of an option SEG you will change		The unit digit of an option SEG you will change		The changed value	
	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
Indication and Details	0		D		Option mode	0~F	Tens' digit of SEG	0~9	Unit digit of SEG	0~9	The changed value	0~F

> 📄 **NOTE**
> - When changing a digit of an indoor unit address setting option, set the SEG3 as 'A'.
> - When changing a digit of indoor unit installation option, set the SEG3 as '2'.
>
> **Ex) When setting the 'buzzer control' into disuse status.**
>
> | Option | SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
> |---|---|---|---|---|---|---|
> | Explanation | PAGE | MODE | The option mode you want to change | The tens' digit of an option SEG you will change | The unit digit of an option SEG you will change | The changed value |
> | Indication | 0 | D | 2 | 1 | 7 | 1 |

■ OPTION ITEMS

Model	Option Code
NS052SDXEA	011014-1963A2-27343C-370010 020000-100000-200000-300000 03443D-103F44-2443D3-3F4400
NS071SDXEA	014077-1660C8-274750-370000
NS035LDXEA	011037-1361DB-272328-370010 020000-100000-200000-300000 034F46-104C52-24F464-3C5200
NS052LDXEA	011014-1563E6-27343C-370010 020000-100000-200000-300000 034644-104049-246444-304900
NS071LDXEA	014077-1560D9-274750-370000

◆ If you are going to use up to SEG 24, please refer to following instruction.

SEG 17 : 0   1: Using high ceiling kit for 4way.

SEG 18 :

	Not in use	Use
Change temperature display	0(Celsius)	1(Fahrenheit)
Sound Mute	0	2
Mixed operation control	0	4

◆ If you want to use multiple functions, add each of the 'use' value of the function you want to used and input the final addition as option value.(Use Fahrenheit + Sound mute + Mixed operation control : 1 + 2 + 4 = 7)

Ex) 044217-1d00e6-200000-300000

When using Sound mute : 044217-1d00e6-200002-300000

When using high ceiling kit for 4way and mixed operation error preventing function : 044217-1d00e6-200014-300000

4-4 Items to be checked first

1. The input voltage should be rating voltage ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2. Is the link cable linking the indoor unit and the outdoor unit linked properly?
   The indoor unit and the outdoor unit shall be linked by 4 cables.
   Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
   Otherwise the air conditioner may not operate properly.

3. When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the air conditioner.

No	Operation of air conditioner	Explanation
1	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the INDOOR FAN should operate. **[In case of heat pump model]** In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew.
2	Compressor stops operation intermittently in DRY(⌂) mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
3	**[In case of heat pump model]** Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 12 minutes(maximum) until the deice is completed.
4	**[In case of heat pump model]** The compressor and indoor fan stop intermittently in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
5	**[In case of heat pump model]** Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation

4-5 Fault Diagnosis by Symptom

4-5-1 No Power(completely dead) - Initial diagnosis

1. Checklist:

   1) Is Power source voltage normal?

   2) Is AC power linked correctly?(miss-wiring, wire detaching etc.)

   3) Is any LED on the MAIN PCB of Outdoor unit lit?

   4) Is terminal voltage for indoor unit normal?(230Vac nominal)

   5) Is Wired remote controller installed correctly?

2. Troubleshooting procedure

```
┌──────────────────────────────────────────────────┐
│ Turn off the breaker and turn it on after 30 seconds │
└──────────────────────────────────────────────────┘
                         │
                         ▼
        Check outdoor unit terminal          Abnormal    ┌─────────────────────────┐
        block voltage on each N-R,N-S,N-T ──────────────▶│ Check AC power source.   │
        (230Vac nominal)                                 │ Reconnect wires correctly │
                         │ Normal                         └─────────────────────────┘
                         ▼
        Check outdoor unit terminal          Abnormal    ┌─────────────────────────┐
        block voltage on L-N for indoor unit ────────────▶│ Check Inner wiring of    │
        (230Vac nominal)                                 │ outdoor unit             │
                         │ Normal                         └─────────────────────────┘
                         ▼
        Check indoor unit                    Abnormal    ┌─────────────────────────┐
        terminal block voltage on L-N ───────────────────▶│ Check cable and connection│
        (230Vac nominal)                                 │ of wire between indoor and│
                         │ Normal                         │ outdoor unit             │
                         ▼                                └─────────────────────────┘
        Check indoor unit                    Abnormal    ┌─────────────────────────┐
        terminal block voltage on V1-V2 ─────────────────▶│ Check Indoor control     │
        (12Vdc nominal)                                  │ PCB, Transformer, and    │
                         │ Normal                         │ FUSE on PCB and replace  │
                         ▼                                │ one which is broken.     │
        Check DC power voltage of            Abnormal    └─────────────────────────┘
        remote controller(V1,V2) ────────────────────────▶│ Check cable and connection│
                         │ Normal                         │ of wire between remote   │
                         ▼                                │ controller and indoor unit│
        Press the On/Off button on the       No display  └─────────────────────────┘
        wired remote controller to operate ──────────────▶│ Replace wired remote     │
        the air conditioner                              │ controller               │
                         │ No display                     └─────────────────────────┘
                         ▼
        Check DIP SW in the                  Wrong setting┌─────────────────────────┐
        wired remote controller. ────────────────────────▶│ Set DIP SW correctly     │
                         │ Correct                        └─────────────────────────┘
                         ▼
        Is there any error display on         Yes         ┌─────────────────────────┐
        the wired remote controller ─────────────────────▶│ Check each item according│
                         │ No                              │ to error code list       │
                         ▼                                └─────────────────────────┘
        ┌──────────────────────────┐
        │ Check the setting temperature │
        └──────────────────────────┘
```

4-5-2 The Outdoor unit Power Supply error

1. Checklist:

    1) Are the input power voltage and power connection correct?
    2) Is there any Fuse Short of the indoor or outdoor unit?
    3) Is any LED lit on both MAIN PCB and INVERTER PCB?
    4) Are Reactor wires of the outdoor unit connected correctly?

2. Troubleshooting procedure

MAIN PCB	INVERTER PCB
ALL OFF	ALL OFF
Error 202 display (Table No.14)	Normal
Error 425 display (Table No.22)	ALL OFF
Error 203 display (Table No.3)	ALL OFF
Error 466 display (Table No.7)	Error 466 display (Table No.7)
Error 469 display (Table No.19)	Error 469 display (Table No.19)

Check LEDs on both MAIN PCB and INVERTER PCB after1 minutes from power on

Is voltage on N-T of terminal block over 300V?
Yes → Check and correct the power cable wiring
No ↓

Are wire and socket connected correctly? Power line N and T wire (Terminal block - reactor - EMI PCB), CN9(EMI PCB), CN80(MAIN PCB)
No → Check and correct the wire or socket connection
Yes → Check Fuses listed blow FUSE3(EMI PCB), FUSE(MAIN PCB)

Is there miss connection of power and communication wire between indoor and outdoor?
Yes → Correct the cable wiring between indoor and outdoor
No → Check F1,F2 communication line wiring. CN50(MAIN PCB)

Is there any power wire detaching especially phase R and S?
Yes → Check and correct the power cable wiring
No → Check Fuses listed blow FUSE1(EMI PCB), FUSE2(EMI PCB)

Are wire and socket connected correctly? CN31(MAIN PCB),CN10(INVERTER PCB)
No → Check and correct the wiring
Yes ↓

Is the FUSE on INVERTER PCB blown?
Yes → Replace the FUSE
No ↓

Is R100 on INVERTER PCB open? (200ohm moninal)
Yes → Replace INVERTER PCB
No ↓

Check INVERTER PCB
Also check each BLDC FAN moto short or not, by resistance between pin #1 and #3

Are wire and socket connected correctly? CN05,06,07 TAB terminal(EMI PCB), CN20(INVERTER PCB)
No → Check and correct the wiring
Yes → Check the M/C

4-5-3 The Outdoor unit Fan error

1. Checklist:
   1) Are the input power voltage and power connection correct?
   2) Is the motor wire connected to the outdoor PCB correctly?
   3) Is there no obstacle at the surrounding of motor and propeller?
   4) Does the driver in the motor case broken?

2. Troubleshooting procedure

Is the connection of FAN housing certainly to PCB socket?(CN40, CN41) — No → Check the connection of CN40 and CN41

Yes ↓

Take off each Fan motor housing after 1 minutes from turning off the power

↓

Is each resistance of FAN cable housing pin #1-#3 over 1Mohm, pin #4-#3, #5-#3 and #6-#3 over 1Kohm on each FAN motor? — No → Exchange the FAN motor because of driver inside of the motor case broken

Yes ↓

Mount each Fan housing to PCB socket and turn on the power

↓

Is the Pin voltage #1 - #3 of CN40 and 41 over 250V? — No → Follow the check procedure of outdoor unit power supply error check

Yes ↓

Is the Pin voltage #5 - #3 of CN40 and 41 15V? — No → Exchange INVERTER PCB

Yes ↓

Is the Pin voltage #5 - #3 of CN40 and 41 within 1-6V during the operation? — No → Exchange INVERTER PCB

Yes ↓

Is the Fan in rotation during TEST operation in cooling mode — No → Exchange the FAN motor not in rotation

Yes ↓

Is the Pin voltage #6 - #3 of CN40 and 41 changed high(4-5V) and low(0-1V) in case of making manual rotation slowly? — Yes → Exchange INVERTER PCB

No ↓

Is the Pin voltage #7 - #3 of CN40 and 41 low(0-1V) in normal rotation? — No → Exchange the FAN motor

Yes ↓

Exchange INVERTER PCB

TEST operation
press K900 button on the MAIN PCB after power on.

- once : cooling mode
- twice in a second :
  heating mode

4-5-4 Total current trip error

1. Checklist :
   1) Is the input power voltage proper?
   2) Is the refrigerant charged properly?
   3) Does the compressor rotate normally?(Reverse rotation, Locking etc.)
   4) Does the outdoor fan operate normally?(Fan propeller loss, Motor error ect.)
   5) Is the installation condition of outdoor unit good?(Piping, Space etc.)
   6) Is there no ventilation obstruction at the surrounding of outdoor unit?(Outdoor unit cover, Fan front obstruction etc.)
   7) Is there no ventilation obstruction at the surrounding of indoor unit?(Overload condition in heating mode)

2. Troubleshooting procedure

```
Is the installation of outdoor unit good?  ──No──▶  Reinstall and remove the obstruction
            │ Yes
            ▼
Is the installation of indoor unit good?   ──No──▶  Reinstall and remove the obstruction
            │ Yes
            ▼
Does the compressor rotate normally?       ──No──▶  Exchange the compressor
            │ Yes
            ▼
Are the service valves full opened?        ──No──▶  Open valve screw to the end.
            │ Yes
            ▼
Is AC power voltage normal during the      ──No──▶  Check AC power source
compressor in operation?
            │ Yes
            ▼
                                                    Exchange INVERTER PCB
```

4-5-5 In case of heating at the cooling mode or cooling at the heating mode

1. Troubleshooting procedure

```
        ◇ Is the Thermo off? ──Yes──▶ [ Change the setting temperature of
                │                        remote control. ]
                No
                │
                ▼
        ◇ Is the unit in the
          defrosting operation? ──Yes──▶ [ Operate it with a heating mode
                │                          as soon as the defrosting is finished. ]
                No
                │
                ▼
        ◇ Is the compressor
          in 3 minutes off? ──Yes──▶ [ After 3 minutes, cooling
                │                      and heating start automatically. ]
                No
                │
                ▼
        ◇ Is much frost
          in the indoor heat ──Yes──▶ ◇ Is the outdoor air sensor and
          exchanger?                     outdoor heat exchanger attached ──No──▶ [ Attach the sensor correctly. ]
                │                        correctly?
                No                          │
                │                          Yes──▶ [ Over shortage of the refrigerant ]
                ▼
        ◇ Does the
          4-WAY valve operate ──No──▶ ◇ Is the 4-WAY valve connector
          normally?                      connected correctly? ──No──▶ [ Connect the connecter correctly. ]
                │                           │
                │                          Yes
                │                           ▼
                │                       / Check the resistance value \ ──NG──▶ [ 4-WAY valve coil error ]
                │                       \ of 4-WAY valve coil.       /
                │                           │
                │                          OK
                │                           ▼
                │                       ◇ Dose the voltage of AC220V
                │                         apply to the connector of 4-WAY ──No──▶ [ Exchange the outdoor PCB. ]
                │                         valve coil during the operation?
                │                           │
                │                          Yes
                ▼                           ▼
        [ Go to the next page ]        [ 4-WAY valve main body error ]
```

In case of heating at the cooling mode or cooling at the heating mode(cont.)

```
                  From the previous page
                           │
                           ▼
        ┌──────────────┐         No      ┌──────────────┐    No   ┌─────────────────┐
        │   Does the   │───────────────▶│ Is much frost │───────▶│ Connect the     │
        │ EEV operate  │                 │ in the heat   │         │ connector.      │
        │  normally?   │                 │ exchanger?    │         └─────────────────┘
        └──────────────┘                 └──────────────┘
               │                               │ Yes
               │                               ▼
               │                        ┌──────────────┐    NG    ┌─────────────────┐
               │                        │  Check the   │────────▶│ EEV coil error  │
               │                        │ resistance   │          └─────────────────┘
               │                        │ value of     │
               │                        │ EEV coil.    │
               │                        └──────────────┘
               │                               │ OK
               │                               ▼
               │                        ┌──────────────┐    No    ┌─────────────────┐
               │                        │ Is much frost │───────▶│ Exchange        │
               │                        │ in the heat   │         │ the out PCB.    │
               │                        │ exchanger?    │         └─────────────────┘
               │                        └──────────────┘
               │                               │ Yes
               │                               ▼
               │                        ┌──────────────────┐
               │ Yes                    │ EEV main body error │
               │                        └──────────────────┘
               ▼
        ┌──────────────┐        Yes       ┌──────────────────────────────────┐
        │   Does the   │────────────────▶│ The over shortage of refrigerant, │
        │ outdoor fan  │                  │ Insufficient Capacity, Load       │
        │ operate at   │                  │ estimation error                  │
        │ the operation│                  └──────────────────────────────────┘
        │of compressor?│
        └──────────────┘
               │ No
               ▼
        ┌──────────────┐        No        ┌─────────────────┐
        │    Is the    │─────────────────▶│ Connect the     │
        │ outdoor fan  │                   │ connector.      │
        │  connected   │                   └─────────────────┘
        │  correctly?  │
        └──────────────┘
               │ Yes
               ▼
        ┌──────────────┐        NG        ┌─────────────────┐
        │Check the     │─────────────────▶│ Outdoor fan error│
        │resistance    │                   └─────────────────┘
        │value of      │
        │outdoor fan.  │
        └──────────────┘
               │ OK
               ▼
        ┌──────────────┐       Yes        ┌─────────────────┐
        │  Dose the    │─────────────────▶│ Check the motor │
        │voltage of    │                   │ wire.           │
        │DC300V apply  │                   └─────────────────┘
        │to the connector│
        │of outdoor fan │
        │during the     │
        │operation of   │
        │outdoor unit?  │
        └──────────────┘
               │ No
               ▼
        ┌──────────────────┐
        │ Outdoor PCB error │
        └──────────────────┘
```

4-5-6 Outdoor temperature sensor error

1. Checklist :

   1) Is the sensor connector connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

```
┌─────────────────────────────┐                    ┌─────────────────────────────┐
│ Is the sensor connector     │                    │ Reconnect the sensor        │
│ connected correctly in      │───────────────────▶│ connector.                  │
│ accordance with a color?    │                    │                             │
└─────────────────────────────┘                    └─────────────────────────────┘
              │ Yes
              ▼                              No
┌─────────────────────────────┐      ◀─────────────
│ Is the temperature sensor   │                    ┌─────────────────────────────┐
│ connected correctly without │───────────────────▶│ Change the position of      │
│ separation?                 │                    │ sensor.                     │
└─────────────────────────────┘                    └─────────────────────────────┘
              │ Yes                         No
              ▼                     ◀─────────────
┌─────────────────────────────┐   No
│ Does the both terminal of   │
│ sensor satisfy the          │───────────────────▶┌─────────────────────────────┐
│ resistance value in         │                    │ Exchange the sensor.        │
│ accordance with temperature?│                    └─────────────────────────────┘
│ (Refer to the R/T TABLE)    │
└─────────────────────────────┘
              │ Yes                         No
              ▼                     ◀─────────────
┌─────────────────────────────┐   No
│ Is the resistance value     │
│ of sensor connection        │───────────────────▶┌─────────────────────────────┐
│ pull_up 18K?                │                    │ Exchange the PCB.           │
└─────────────────────────────┘                    └─────────────────────────────┘
              │ Yes
              ▼
                                 ┌─────────────────────────────┐   ┌──────────────────┐
                                 │ Exchange the PCB.           │──▶│ Normal operation │
                                 └─────────────────────────────┘   └──────────────────┘
                                                                          │
                                                                          ▼
                                                                   ┌──────────────────┐
                                                                   │ Exit             │
                                                                   └──────────────────┘
```

Temperature-Resistance

Graph: X-axis Temperature(°C) from -50 to 103; Y-axis Resistance(kΩ) from 0.0 to 400.0. Legend: MAX(kΩ), CENTER(kΩ), MIN(kΩ).

4-5-7 Discharge temperature sensor error

1. Checklist :

   1) Is the sensor connector connected correctly?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

```
┌─────────────────────────────┐                    ┌─────────────────────────────┐
│ Is the sensor connector     │                    │ Reconnect the sensor        │
│ connected correctly in      │───────────────────▶│ connector.                  │
│ accordance with a color?    │                    └─────────────────────────────┘
└─────────────────────────────┘
              │ Yes
              ▼                          No
┌─────────────────────────────┐      ◀─────────────
│ Is the temperature sensor   │                    ┌─────────────────────────────┐
│ connected correctly without │───────────────────▶│ Change the position of       │
│ separation?                 │                    │ sensor.                     │
└─────────────────────────────┘                    └─────────────────────────────┘
              │ Yes
              ▼                          No
┌─────────────────────────────┐      ◀─────────────
│ Does the both terminal of   │        No          ┌─────────────────────────────┐
│ sensor satisfy the resistance│──────────────────▶│ Exchange the sensor.        │
│ value in accordance with    │                    └─────────────────────────────┘
│ temperature?                │
│ (Refer to the R/T TABLE)    │
└─────────────────────────────┘
              │ Yes
              ▼                          No
┌─────────────────────────────┐      ◀─────────────
│ Is the resistance value     │        No          ┌─────────────────────────────┐
│ of sensor connection        │──────────────────▶│ Exchange the PCB.           │
│ pull_up 24K?                │                    └─────────────────────────────┘
└─────────────────────────────┘
              │ Yes
              ▼                                     ┌─────────────────────────────┐
┌─────────────────────────────┐                    │ Normal operation            │
│ Exchange the PCB.           │───────────────────▶└─────────────────────────────┘
└─────────────────────────────┘                                  │
                                                                  ▼
                                                   ┌─────────────────────────────┐
                                                   │ Exit                        │
                                                   └─────────────────────────────┘
```


Temperature-Resistance

4-5-8 Coil temperature sensor error

1. Checklist :

    1) Is the sensor connector connected correctly?

    2) Is the sensor placed correctly?

    3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?

    4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

Is the sensor connector connected correctly in accordance with a color?	Reconnect the sensor connector.
↓ Yes ← No	
Is the temperature sensor connected correctly without separation?	Change the position of sensor.
↓ Yes ← No	
Does the both terminal of sensor satisfy the resistance value in accordance with temperature? (Refer to the R/T TABLE)	Exchange the sensor.
↓ Yes ← No / No	
Is the resistance value of sensor connection pull_up 18.2K?	Exchange the PCB.
↓ Yes ← No / No	
Exchange the PCB.	Normal operation
	Exit

Temperature-Resistance

Legend: MAX(kΩ), CENTER(kΩ), MIN(kΩ)

Resistance(kΩ) axis: 0.0, 50.0, 100.0, 150.0, 200.0, 250.0, 300.0, 350.0, 400.0

Temperature(°C) axis: -50, -41, -32, -23, -14, -5, 4, 13, 22, 31, 40, 49, 58, 67, 76, 85, 94, 103

4-5-9 Fan error

1. Checklist :
   1) Isn't the fan locked?
   2) Is the sensor placed correctly?
   3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
   4) Is the resistance value of sensor connection pull_up correct?

2. Troubleshooting procedure

```
┌─────────────────────────┐                    ┌─────────────────────────┐
│   Isn't the Fan locked? │ ─────────────────► │   Remove the Fan lock.  │ ──┐
└─────────────────────────┘                    └─────────────────────────┘   │
            │ Yes                          No                                 │
            ▼              ◄───────────────────────                           │
┌─────────────────────────┐        No          ┌─────────────────────────┐   │
│ Is the connector        │ ─────────────────► │   Connect the connector.│ ──┤
│ connected correctly?    │                    └─────────────────────────┘   │
└─────────────────────────┘                                                  │
            │ Yes                          No                                 │
            ▼              ◄───────────────────────                           │
┌─────────────────────────┐        No          ┌─────────────────────────┐   │
│ Is the color of Fan     │ ─────────────────► │   Exchange the Fan.     │ ──┤
│ wire matched correctly? │                    └─────────────────────────┘   │
└─────────────────────────┘                                                  │
            │ Yes                                                             ▼
            │              ┌─────────────────────┐         ┌─────────────────────┐
            └────────────► │  Exchange the PCB.  │ ──────► │  Normal operation   │
                           └─────────────────────┘         └─────────────────────┘
                                                                     │
                                                                     ▼
                                                           ┌─────────────────────┐
                                                           │        Exit         │
                                                           └─────────────────────┘
```
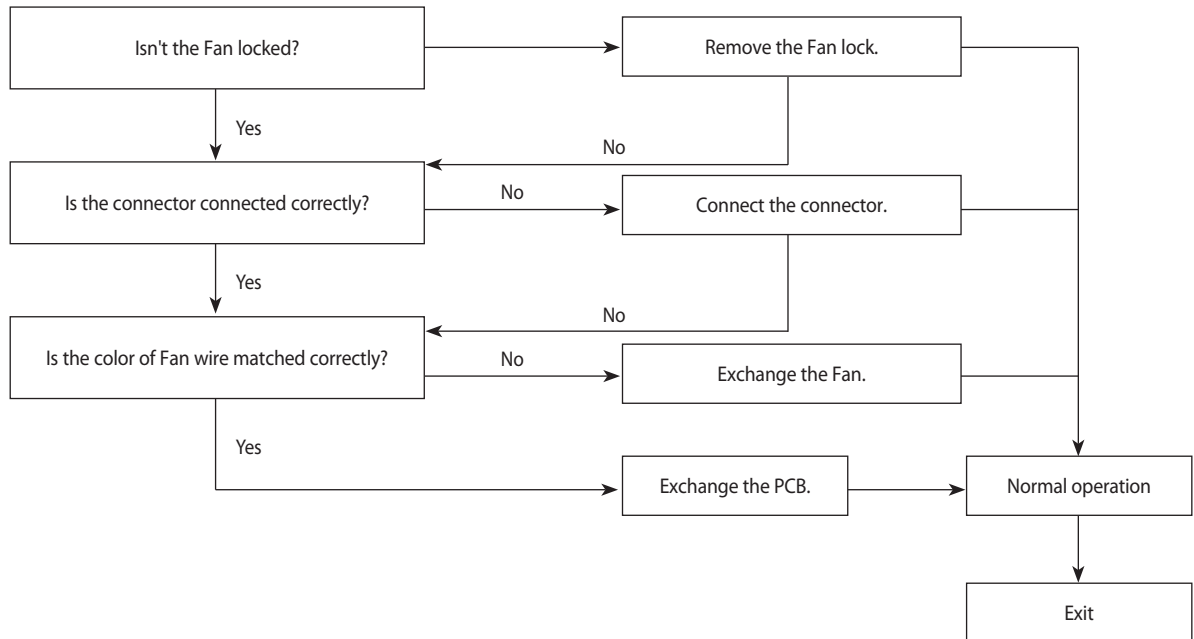
4-5-10 DC-Link voltage sensor error

1. Checklist :

   1) Is the connection of R, S, T power wire normal?
   2) Are Relay RY21 and R200 on the INVERTER PCB mounted normally?

2. Troubleshooting procedure

```
┌─────────────────────────────────────┐      No     ┌──────────────────────────────────┐
│ Are connection of the wire from      │ ──────────→ │ Check and correct the wire       │
│ INVERTER PBA to EMI PBA  normal?     │             │ connection                       │
└─────────────────────────────────────┘             └──────────────────────────────────┘
                  │ Yes
                  ↓
┌─────────────────────────────────────┐
│        Exchange INVERTER PCB         │
└─────────────────────────────────────┘
```
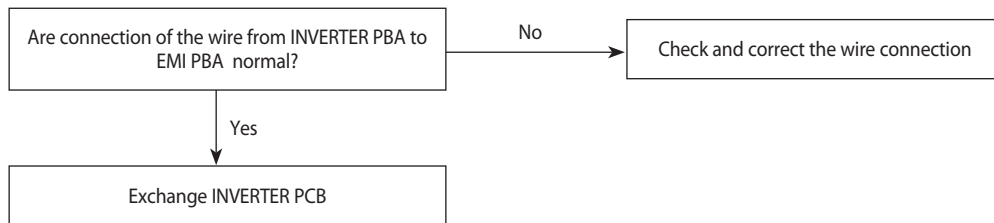
4-5-11 O.C.(Over Current) error

1. Checklist :

   1) Is the refrigerant charged properly?

   2) Does the compressor rotate normally?(Reverse rotation, Locking etc.)

   3) Is connection of compressor wire normal?

   4) Is compressor motor normal?(Insulation, Coil resistance etc.)

   5) Does a temporary cycle overload condition happened?

2. Troubleshooting procedure

Is the installation of outdoor unit good?	No →	Reinstall and remove the obstruction
↓ Yes		
Is the installation of indoor unit good?	No →	Reinstall and remove the obstruction
↓ Yes		
Are the service valves full opened?	No →	Open valve screw to the end.
↓ Yes		
Does the compressor wire connected to the compressor normally?	No →	Correct the compressor wire connection
↓ Yes		
Is insuration resistance between each compressor terminal and body normal?	No →	Exchange the compressor
↓ Yes		
Does the compressor rotate normally?	No →	Exchange the compressor
↓ Yes		
Did AC power voltage interruption happen during the compressor in operation?	Yes →	Check AC power source
↓ No		
	→	Exchange INVERTER PCB

4-5-12 Communication error

1. Checklist :
   1) Is the communication cable between the indoor unit and outdoor unit connected correctly?
   2) Isn't the power cable and communication cable wiring error?

2. Troubleshooting procedure

```
┌─────────────────────────────┐
│    Restart after power off.  │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐   No    ┌─────────────────────────────┐
│    Is the communication error│ ──────▶ │    Terminate the service.    │
│       occurred again?        │         └─────────────────────────────┘
└─────────────────────────────┘
              │ Yes
              ▼
┌─────────────────────────────┐   No    ┌─────────────────────────────┐
│    Isn't the power cable and │ ──────▶ │    Correct the wrong wiring. │
│ communication cable wiring error?│     └─────────────────────────────┘
└─────────────────────────────┘
              │ Yes
              ▼
┌─────────────────────────────┐   No    ┌─────────────────────────────┐
│    Is the connection of      │ ──────▶ │    Correct the connection of │
│ communication cable normal?  │         │    communication cable.      │
└─────────────────────────────┘         └─────────────────────────────┘
              │ Yes
              ▼
┌─────────────────────────────┐
│  Exchange the outdoor unit PCB.│
└─────────────────────────────┘
```
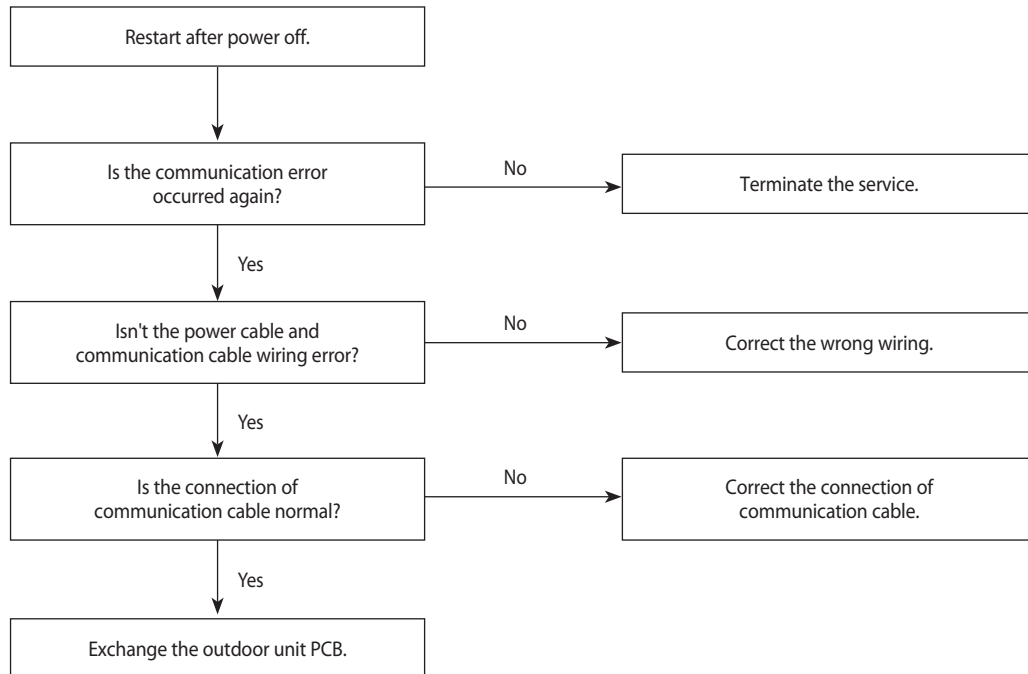
4-5-13 Compressor start error

1. Checklist :
   1) Is the connection of cable for the compressor and power?
   2) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

```
┌─────────────────────────┐
│  Restart after power off.│
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐   No    ┌─────────────────────────┐
│ Is the restart error     │───────▶│  Terminate the service.  │
│ occurred again?          │         └─────────────────────────┘
└─────────────────────────┘
            │ Yes
            ▼
┌─────────────────────────┐   No    ┌─────────────────────────┐
│ Is the interphase        │───────▶│ Exchange the compressor. │
│ resistance value of      │         └─────────────────────────┘
│ compressor(u↔v, v↔w,     │
│ w↔u) normal?             │
└─────────────────────────┘
            │ Yes
            ▼
┌─────────────────────────┐   No    ┌─────────────────────────┐
│ Is the compressor body   │───────▶│ Exchange the compressor. │
│ and interphase           │         └─────────────────────────┘
│ resistance insulated?    │
└─────────────────────────┘
            │ Yes
            ▼
┌─────────────────────────┐   No    ┌─────────────────────────┐
│ Is the connection cable  │───────▶│ Correct the cable        │
│ for the compressor and   │         │ connection.              │
│ power terminal normal?   │         └─────────────────────────┘
└─────────────────────────┘
            │ Yes
            ▼
┌─────────────────────────┐
│  Exchange the PCB.       │
└─────────────────────────┘
```
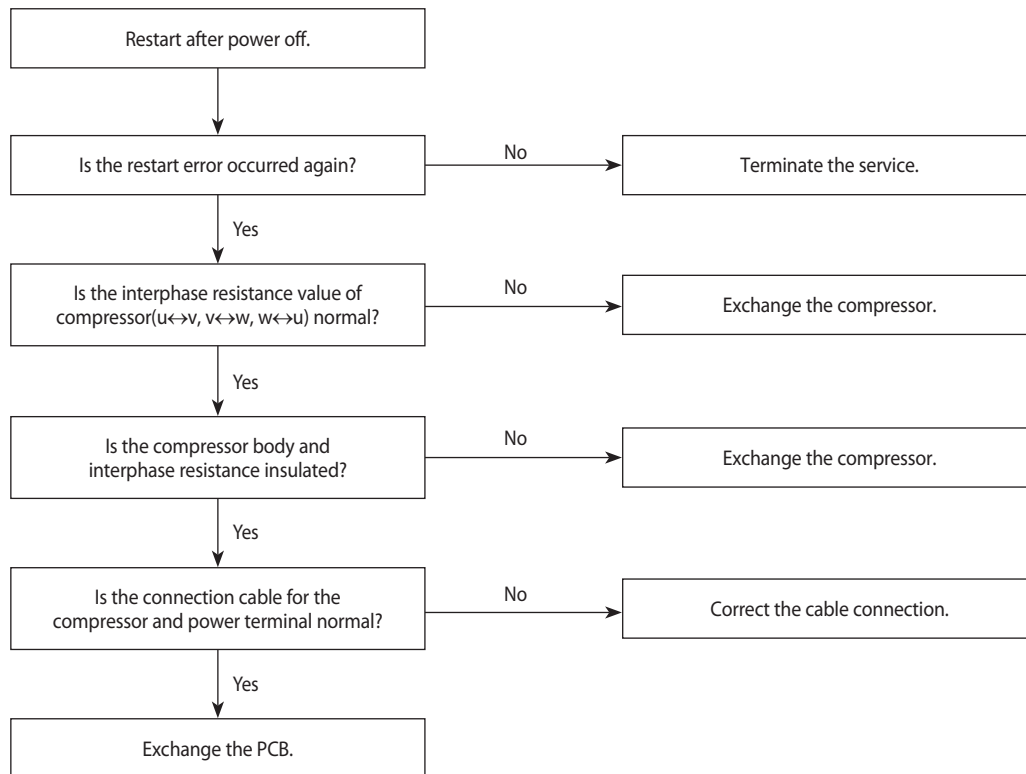
4-5-14 Compressor lock error

1. Checklist :
   1) Is the connection of cable for the compressor and power?
   2) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

```
        ┌────────────────────────────┐
        │   Restart after power off.  │
        └────────────────────────────┘
                      │
                      ▼
        ┌────────────────────────────┐    No    ┌────────────────────────────┐
        │ Is the lock error occurred │─────────▶│   Terminate the service.    │
        │          again?            │          └────────────────────────────┘
        └────────────────────────────┘
                      │ Yes
                      ▼
        ┌────────────────────────────┐    No    ┌────────────────────────────┐
        │ Is the interphase resistance│─────────▶│  Exchange the compressor.  │
        │ value of compressor(u↔v,   │          └────────────────────────────┘
        │ v↔w, w↔u) normal?          │
        └────────────────────────────┘
                      │ Yes
                      ▼
        ┌────────────────────────────┐    No    ┌────────────────────────────┐
        │ Is the compressor body and │─────────▶│  Exchange the compressor.  │
        │ interphase resistance      │          └────────────────────────────┘
        │ insulated?                 │
        └────────────────────────────┘
                      │ Yes
                      ▼
        ┌────────────────────────────┐    No    ┌────────────────────────────┐
        │ Is the connection cable for│─────────▶│ Correct the cable connection.│
        │ the compressor and power   │          └────────────────────────────┘
        │ terminal normal?           │
        └────────────────────────────┘
                      │ Yes
                      ▼
        ┌────────────────────────────┐
        │     Exchange the PCB.       │
        └────────────────────────────┘
```
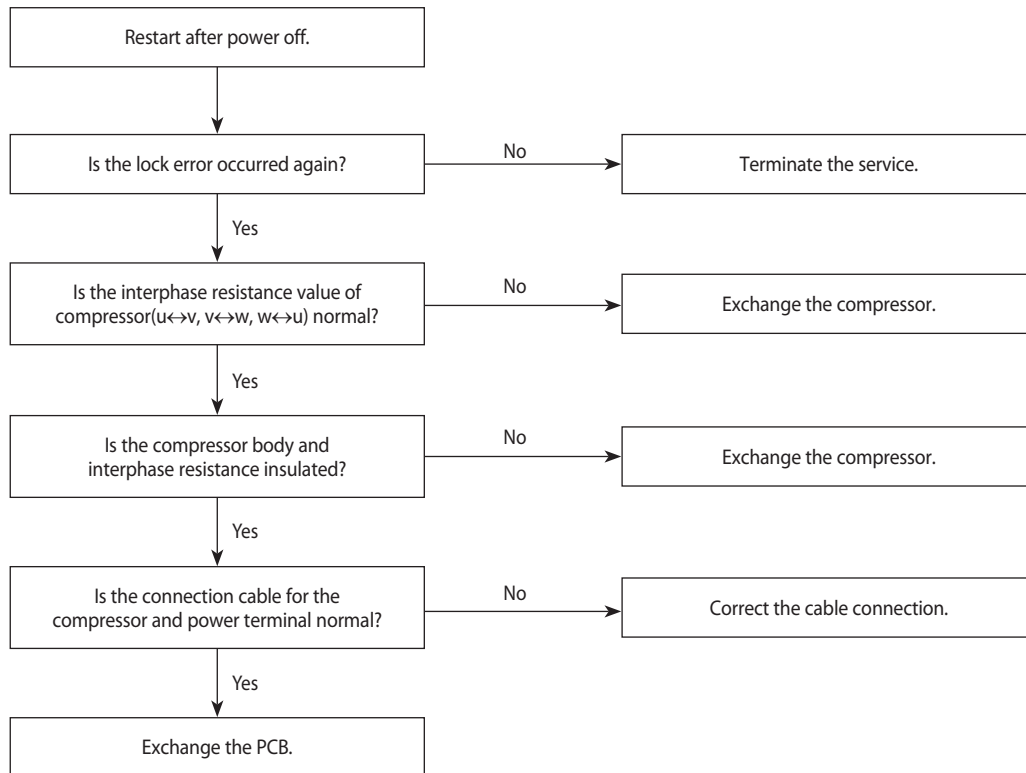
4-5-15 DC Link Over voltage/ Low voltage error

1. Checklist :
   1) Is the power voltage normal?(Lightning, Power interruption etc.)
   2) Is AC Power cable connection normal?(Detaching the wire)

2. Troubleshooting procedure

Is the AC Power cable connection to the outdoor unit terminal block good?	→ No →	Check and reconnecting the AC power cable wire
↓ Yes		
Is the connection of reactor terminal good?	→ No →	Check and reconnecting the reactor wire at the TAB terminal
↓ Yes		
Are the FUSEs on EMI PCB blown?	→ Yes →	Replace the blown FUSE
↓ No		
Push the center bar of M/C and mesure the resistance of each contact.		
↓		
Is each contact resistance normal? (less than 0.1ohm)	→ No →	Exchange M/C
↓ Yes		
Does the error reappear frequently	→ Yes →	Exchange INVERTER PCB
↓ No		
The cause of this error may be power source trouble as like power interruption. Check the power source.		

4-5-16 The others

1. Capacity miss match

– Check again the indoor unit option code.

4-6 PCB Inspection Method

4-6-1 Pre-inspection Notices

1. Turn off the breaker, AC power source, before disassembling the unit because of electrical hazard.
2. Confirm the complete discharge of capacitor C102, C702, C703, C704, C705, C706, C707 on the INVERTER PCB when you touch the PCB.Especially dischargeing speed of C702-C707 is very slow because of little load in stand-by condition. To confirm the voltae of C702-C707, measure the DC link voltage at the IGBT module pins near C701 at which applying voltage(450-510Vdc) is marked.
   To confirm discharging of C102, measure the voltage of non mounted C103 solder hole or check if all LEDs are off.
3. Don't touch the metal body of electrolytic capacitor for avoiding electrical shock before confirming discharge.
4. To discharging the capacitor use power resistor of about 1 Kohm 10W. Soldering tool(non electronic temperature control type) can be used as a discharging resistor.
5. Don't pull the lead wire but hold the whole housing to disconnect or connect a housing from or to the PCB.

4-6-2 Inspection Procedure

1. Check the connection of each housing to the connector first and the peeling of PCB copper pattern.
2. The PCB is composed of the 3 part in the indoor unit.
   ● INDOOR Main PCB part : Indoor unit control, MICOM and surrounding circuit, relay, fan motor driving circuit, sensor reading circuit, buzzer driving circuit and DC power supplying circuit.
   ● Display PCB part : LED lamps, Switch,Remocon module.
   ● INDOOR EMI PCB part : Line filter, Noise Capacitor and Varistor
3. The PCB is composed of the 3 part in the outdoor unit.
   ● EMI PCB part : Line filter for electrical noise, Varistors for surge and Fuses.
   ● MAIN PCB part : Refrigeration cycle controller with MICOM
   ● INVERTER PCB part : Compressor driving inverter and BLDC fan controller

4-6-3 Indoor Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Open the electronic component box and check the PCB fuse	Turn off the power 1) Is the Fuse F701 on the EMI PCB blown? 2) Is the Fuse F702 on the MAIN PCB blown?	• Over current • Indoor fan motor short • PCB AC Part pattern short
2	Check the LEDs for DC power and communi-cation condition	Turn on the power 1) Is RED LED blinking? his led means micom is running normally. 2) Is GREEN LED blinking? This means communication between Indoor and Outdoor unit is on 3) Is YELLOW LED blinking? This means communication between Indoor and wired remote controller is on. It may take one minute to start communication	• Communication ciucuit trouble • Communication wire connection trouble • wrong connection for power supply wire of remote controller
3	Check the DIP and rotary switch on the PCB	1) Is the setting of each switch proper?	• Wrong setting of switch
4	Check the DC voltage	1) Is the voltage of CN32 pin #1-#2 12V? 2) Is the voltage of C109 V?	• SMPS on MAIN PBA trouble • Load short
5	FAN operation checking Press the ON/OFF button. 1. FAN Speed[HIGH] 2. FAN mode	1) Is the FAN motor running? 2) Is the connection of CN73 normal?	• Controller trouble inside of the fan motor • connector trouble of CN73

4-6-4 Outdoor Detailed Inspection Procedure

No	Procedure	Inspection Method	Cause
1	Turn OFF the power and check wire and socket connection on each part	Wait until C702-C707 discharged 1) Is connection of housing to socket normal? 2) Is connection of each wire to terminal block normal? 3) Is the reactor wire connection normal? 4) Is there no miss-wiring of each cable?	• installation mistake • miss assembling
2	FUSE check	Is the fuses on each PCB normal? 3 fuese on EMI PCB 1 fuse on MAIN PCB 1 fuse on INVERTER PCB	• wire short • overload • BLDC FAN short error
3	Turn on the power and check voltage of terminal block	Is N-R,N-S,N-T around 230Vac? Is R-S,S-T,T-R around 400Vac? Is L-N(to indoor unit) around 230Vac? Is F1-F2 within 5Vdc?	• miss wiring of power cable • wire detaching
4	Check LED display on AIN PCB	1) Is RED LED ON? 2) Is GREEN LED Blinking once a second? 3) Is LEDs displaying error code pattern?	• MAIN PCB power trouble • bad communication between indoor and outdoor unit • error detection
5	Check LED display on INVERTER PCB	1) Is RED LED ON? 2) Is GREEN LED Blinking once a second? 3) Is LEDs displaying error code pattern?	• INVERTER PCB power trouble • NO communication between MAIN and INVERTER PCB • error detection
6	Check DC voltage of SMPS output	**MAIN PCB** 1) Is voltage of CN51 pin#1-#2 12-14.5V? 2) Is voltage of C108 5V? **INVERTER PCB** 3) Is voltage of CN51 pin#1-#2 5V? 4) Is voltage of C124 12V? 5) Is voltage of each ZD100,ZD101,ZD102,ZD103 17-18V?	• SMPS circuit trouble

7	Check INVERTER PCB	1) Is resistance of R100 200ohm?
		   To check this, touch one probe to CN10 pin#1(N) and the other to D101 upper side pin of '~' marking pins
		2) Is DC Link voltage 450-510V?
		   Check IGBT module pins marking voltage near C701
			• resister
			• wire connection between EMI PCB and INVERTER PCB

8	Check BLDC fan	1) See 12-2-3 The Outdoor unit Fan error(Fault Diagnosis)	

4-7 Main Part Inspection Method

Part	Breakdown Inspection Method			
Indoor Unit Temperature Sensor	Measure sensor resistance with a multimeter			
	Normal	At the normal temperature 37kΩ~8.3kΩ(-7˚C~+30˚C)		
	Abnormal	∞,0Ω...Open or Short		
Indoor Unit BLDC FAN Motor	Measure terminal resistance with a multimeter			
	Normal	At the normal temperature(10˚C~30˚C)		

At the normal temperature(10˚C~30˚C)

wire	pin number	Resistance	Remark
RED - BLACK	1-3	over 1MΩ	+300V motor power
WHITE - BLACK	4-3	1KΩ ~ 2KΩ	+15V control power
YELLOW - BLACK	5-3	200KΩ ~ 300KΩ	control
BLUE - BLACK	6-3	10KΩ ~ 50KΩ	pulse

Part	Breakdown Inspection Method			
	Abnormal	∞,0Ω...Open or Short		
Outdoor Unit Outdoor Temperature Sensor & Cond Temperature Sensor	Measure sensor resistance with a multimeter			
	Normal	At the normal temperature 37kΩ~8.3kΩ(-7˚C~+30˚C) see 12-2-6 and 12-2-8		
	Abnormal	∞,0Ω...Open or Short		
Outdoor Unit Discharge Temperature Sensor	Measure sensor resistance with a multimeter			
	Normal	At the normal temperature 563kΩ~157kΩ(0˚C~+30˚C) see 12-2-7		
	Abnormal	∞,0Ω...Open or Short		
Outdoor Unit BLDC FAN MOTOR	Measure terminal resistance with a multimeter			
	Normal	At the normal temperature(10˚C~30˚C)		

At the normal temperature(10˚C~30˚C)

wire	pin number	Resistance	Remark
RED - BLACK	1-3	over 1MΩ	+300V motor power
WHITE - BLACK	4-3	1KΩ ~ 2KΩ	+15V control power
YELLOW - BLACK	5-3	200KΩ ~ 300KΩ	control
BLUE - BLACK	6-3	10KΩ ~ 50KΩ	pulse
ORANGE - BLACK	7-3	10KΩ ~ 50KΩ	reverse

Part	Breakdown Inspection Method	
	Abnormal	0Ω...Open or Short
Outdoor Unit 4way Valve Solenoid	Measure resistance with a multimeter	
	Normal	At the normal temperature(10˚C~30˚C) 1.6KΩ±15%
	Abnormal	∞,0Ω...Open or Short

5. PCB Diagram and Parts List

■ 5-1 INDOOR MAIN PCB
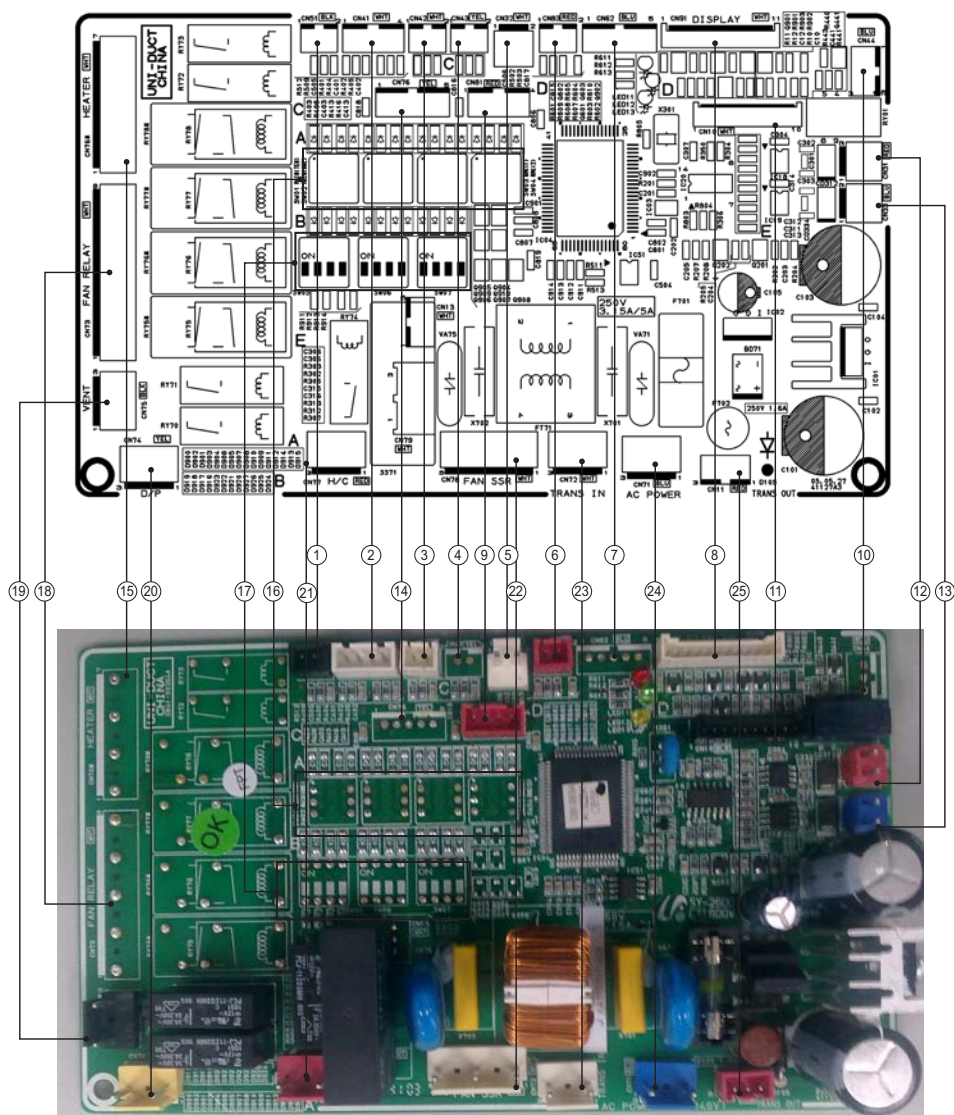
①	Floating S/W : SMW250-02(BLK)	⑬	Wired Remote Controller Communication : YW396-02(BLU)
②	Indoor Pipe In Temperature Sensor : SMW250-04(WHT)	⑭	Option Load Connector : SMW250-05(YEL)
	Indoor Room Temperature Sensor : SMW250-04(WHT)	⑮	Heater : YW39607AV(WHT)
③	Indoor Pipe Out : SMW250-02(WHT)	⑯	Indoor Address S/W
	Temperature Sensor : SMW250-02(WHT)	⑰	Indoor Option S/W
④	Heater Discharge : SMW250-02(YEL)	⑱	Indoor Fan(TAP) : YW396-09AV(WHT)
	Temperature Sensor : SMW250-02(YEL)	⑲	Ventilator : YW396-03AV(BLK)
⑤	Wired Remote Controller Power : YW396-02(WHT)	⑳	Drain Pump : YW396-03AV(YEL)
⑥	External Control(S/W Part) : SMW250-02(RED)	㉑	Hot Coil : YW396-03AV(RED)
⑦	EEV : SMW250-05(BLU) : SMW250-05(BLU)	㉒	Indoor Fan(SSR) : YW396-03AV(RED)
⑧	Display : SMW200-11(WHT) : SMW200-11(WHT)	㉓	Power : YW396-03AV(WHT)
⑨	External Control(Display Part) : SMW250-04(RED)		Transformer Out : YW396-03AV(WHT)
⑩	HALL IC : SMW250-03(BLU)	㉔	Main Power In : YW396-03AV(BLU)
⑪	MICOM Download : SMW200-10(WHT)	㉕	Power : YW396-03AV(BLU)
⑫	Indoor/Outdoor Communication : YW396-02(RED)		Transformer In : SMW250-03(RED)

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■ 5-2 OUTDOOR MAIN PCB
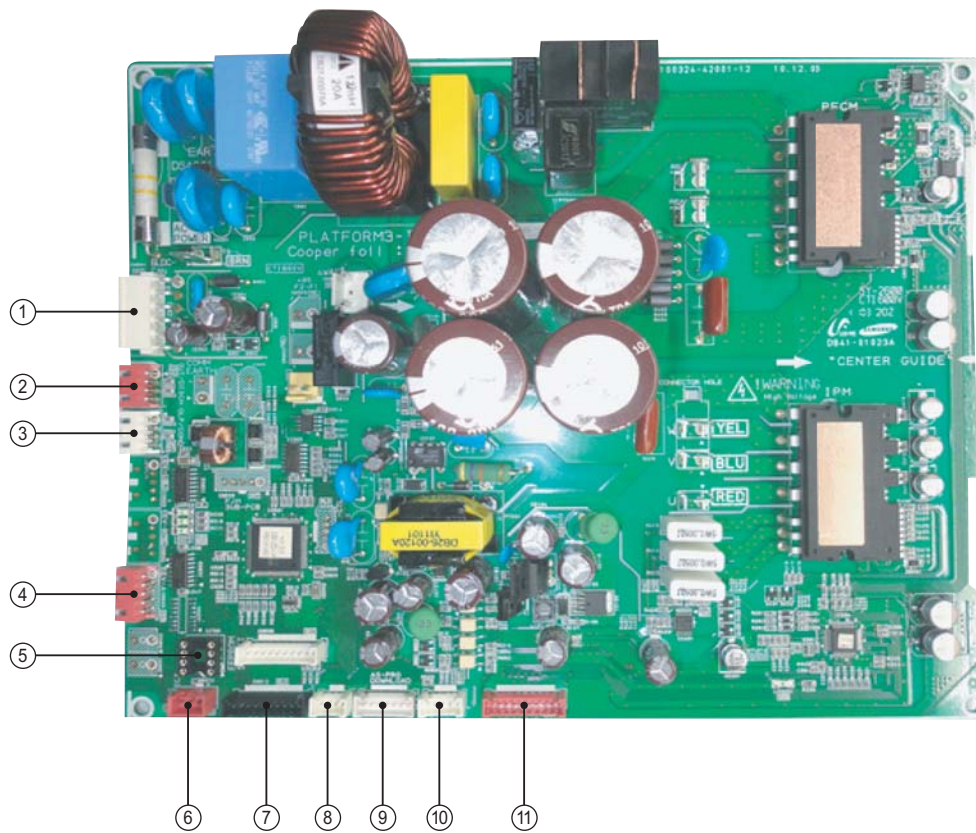
①	OLP /COND THERMISTOR CONNECTOR		SMAW250A-04 WHT
②	OUT/DISCHARGE THERMISTOR CONNECTOR		SMAW250A-04 RE
③	BLDC-FAN CONNETCOR		YAN396-06V WHT
④	EEV-A CONNECTOR		SMAW250A-05 RED
⑤	DISPLAY CONNECTOR		SMW200-10 NTR
⑥	DISPLAY CONNECTOR		SMAW250A-03 RED
⑦	PC DOWNLOADCONNECTOR		SMW200-10 BLK
⑧	S NE T CONNECTOR		SMW200-04 NTR
⑨	AS-PRO DOWNLOAD CONNECTOR		SMAW200A-07 WHT
⑩	DISPLAY CONNE CTORS		MW200-05 NTR
⑪	DOWNLOAD-INV CONNECTOR S		MW200-10 RED

◼ 5-3 OUTDOOR SUB PCB
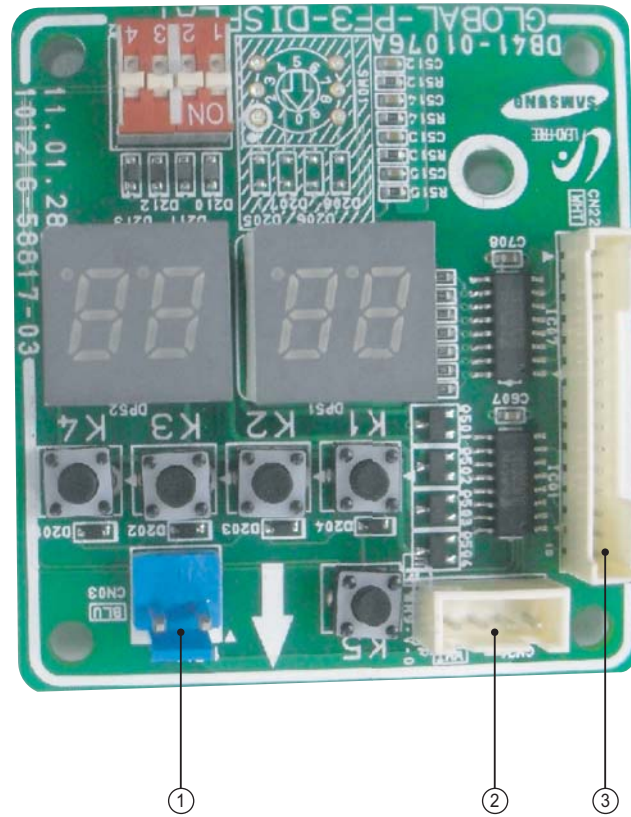
①	12V POWER CONNECTOR	YW396-02V BLU
②	MAIN -SUB SIGNAL CONNECTOT	SMW250-04 WHT
③	MAIN -SUB SIGNAL CONNECTOT	SMW200-15NTR

6. Wiring Diagram

■ 6-1 Indoor Unit

■ Outdoor Unit :RC035DHXEA/ RC052DHXEA

DISPLAY		DESCRIPTION
E 1	2 8	Separate of EVA In temp sensor
E 1	2 9	The number of Outdoor and Indoor ERROR
E 2	0 1	1min,Time out Comm.betweem Indoor and Outdoor
E 2	0 2	1min,Time out Comm.betweem Inverter and Main
E 2	0 3	Outside temperature sensor error(Shor/Open)
E 2	2 1	Outside temperature sensor error(Shor/Open)
E 2	3 1	Outside heat exchange temp sensor error
E 2	4 6	Self Test error-Separate of Cond temp sensor
E 2	5 1	Discharge Temp Sensor error
E 2	6 1	Self Test error-Separate of Discharge temp sensor
E 3	2 0	OLP Sensor error
E 4	0 3	Detect outdoor frozen when COMP stop
E 4	0 4	Prevent overload when COMP stop
E 4	1 6	Discharge over Temp error when COMP stop
E 4	1 9	EEV open error-Self diagnosis
E 4	2 2	EEV close error-Self diagnosis
E 4	4 0	High temperature(over 30°C)of outdoor as heating mode
E 4	4 1	Low temperature(under -10°C)of outdoor as cooling mode
E 4	5 8	Outdoor Fan Error
E 4	6 1	Inverter compressor starting failure(5times)
E 4	6 2	Compressor trip by input current control mode(PFC over current)
E 4	6 3	OLP Over Heat and Comp.stop
E 4	6 4	IPM Over Current(o.c)
E 4	6 5	Compressor Vlimit Error
E 4	6 6	DClink Voltage error(under 150V,over 410V)
E 4	6 7	Compressor wire no-connecting error
E 4	6 8	Current sensor error
E 4	6 9	DClink Voltage sensor error
E 4	7 1	EEPROM error
E 4	7 2	AC ZERO CROSSING SIGNAL OUT error
E 4	7 4	Outdoor heatsink sensor error
E 4	8 3	Over AC-Voltage Error
E 4	8 5	Input-Current sensor error
E 5	0 0	Heatsink Over Heat error
E 5	5 4	Gas leakage error

CODE NO:DB98-34292A   OUTDOOR UNIT

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■ Outdoor Unit : RC071DHXEA
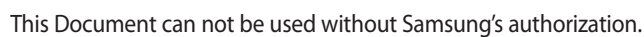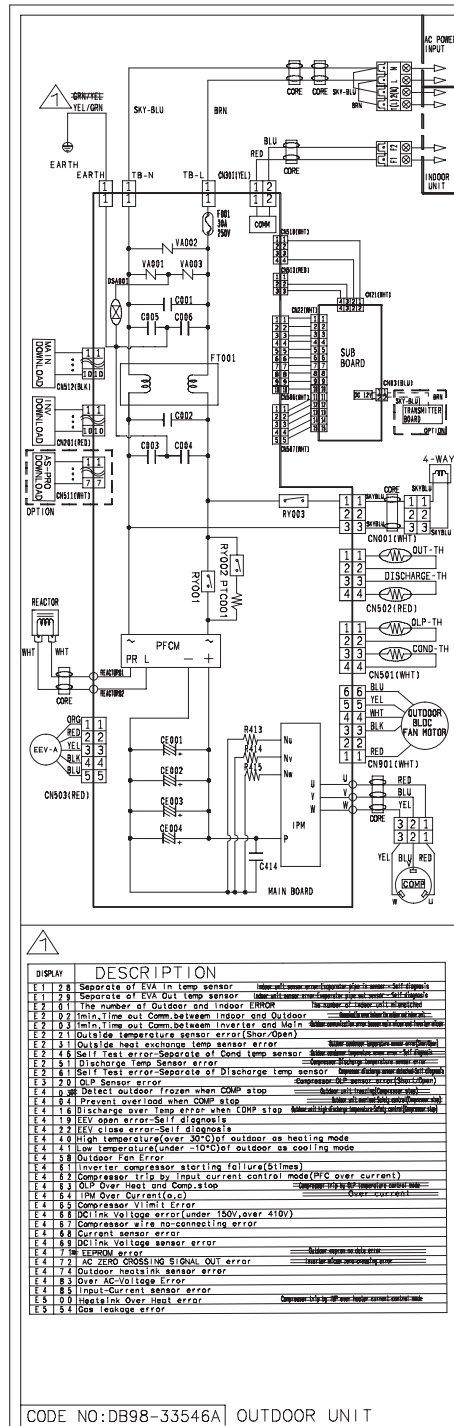
CODE NO:DB98-33546A | OUTDOOR UNIT

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7-1 Indoor Unit

■ **MAIN PCB**

Indoor Load Part Heater, Ventilator Drain Pump, Hot Coil	Temperature Sensor Part Room Temperature, Pipe In Temperature, Pipe Out Temperature, Heater Discharge Temperature
Indoor Fan Part(TAP)	
Indoor Fan Part(SSR)	External Control Part
Display Part	EEV Control Part
485 Communication Part	Wired Remote Controller Part (12V)
Address S/W & Option S/W	
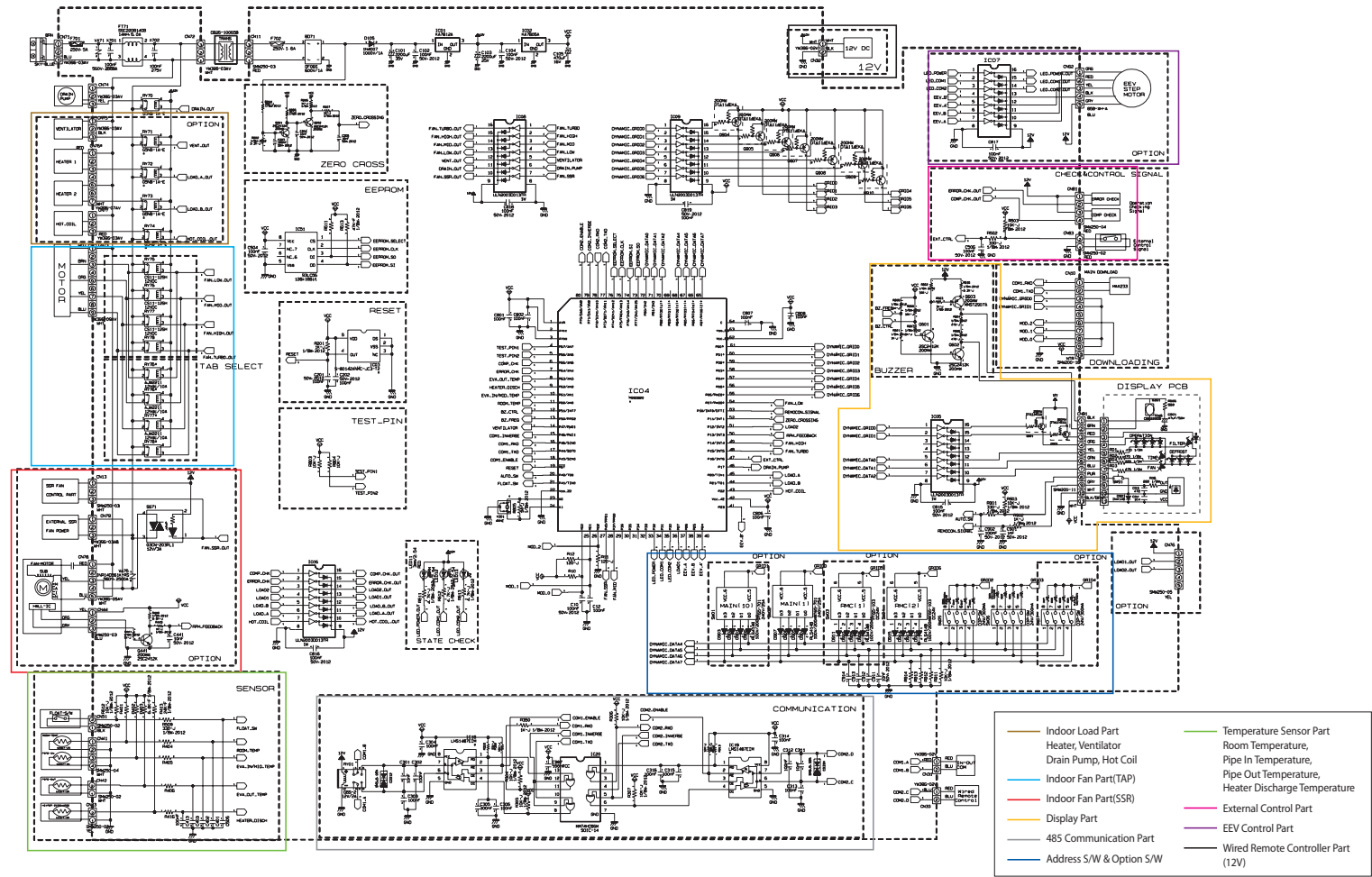
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7-2 OUTDOOR UNIT PCB

7-2-1 MAIN PCB (RC071DHXEA)

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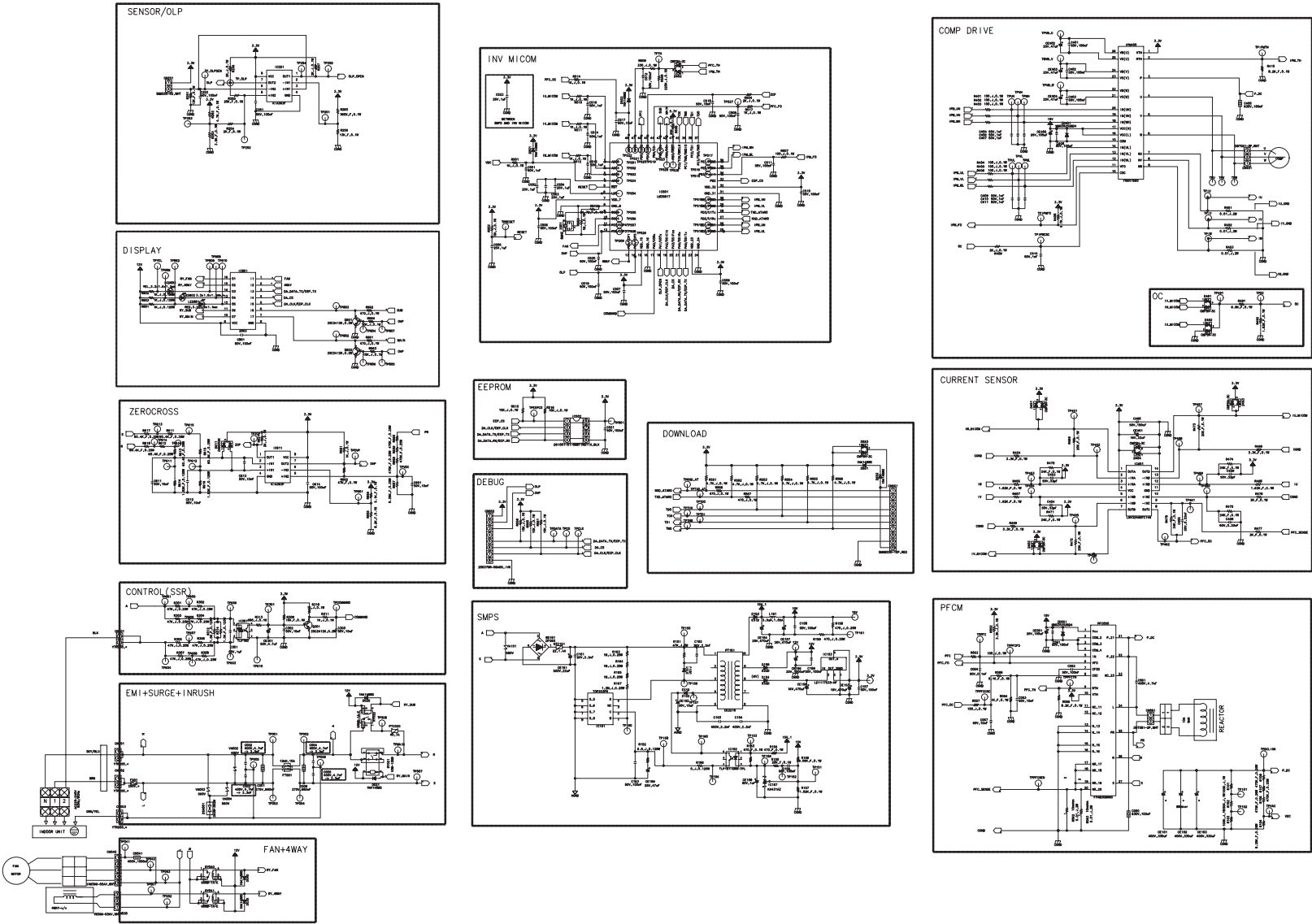These components are not applied for CAC.

TRANSPONDER DC12V

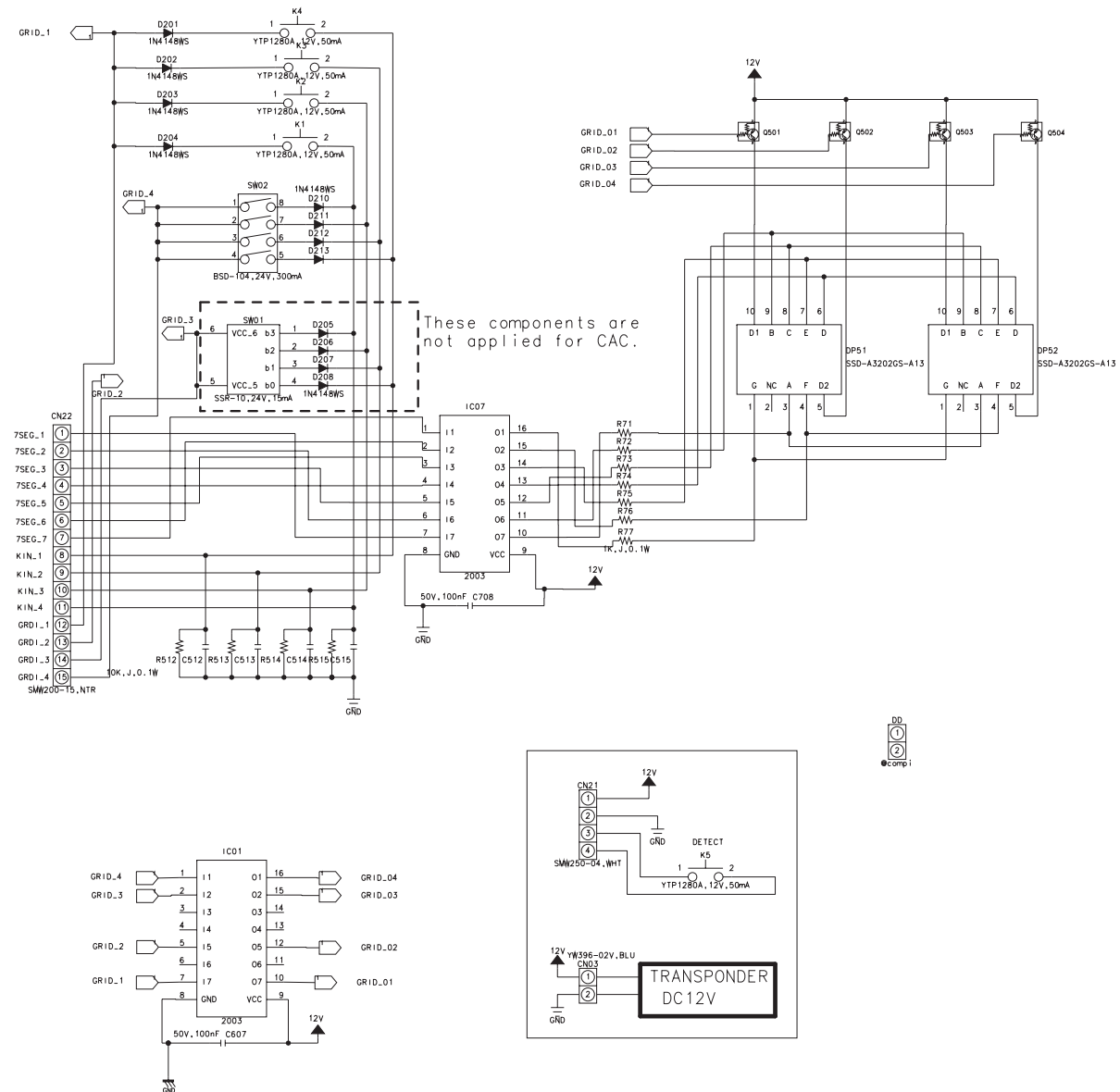This Document can not be used without Samsung's authorization.

7-2 OUTDOOR UNIT PCB

7-2-3 MAIN PCB (RC035/052DHXEA)

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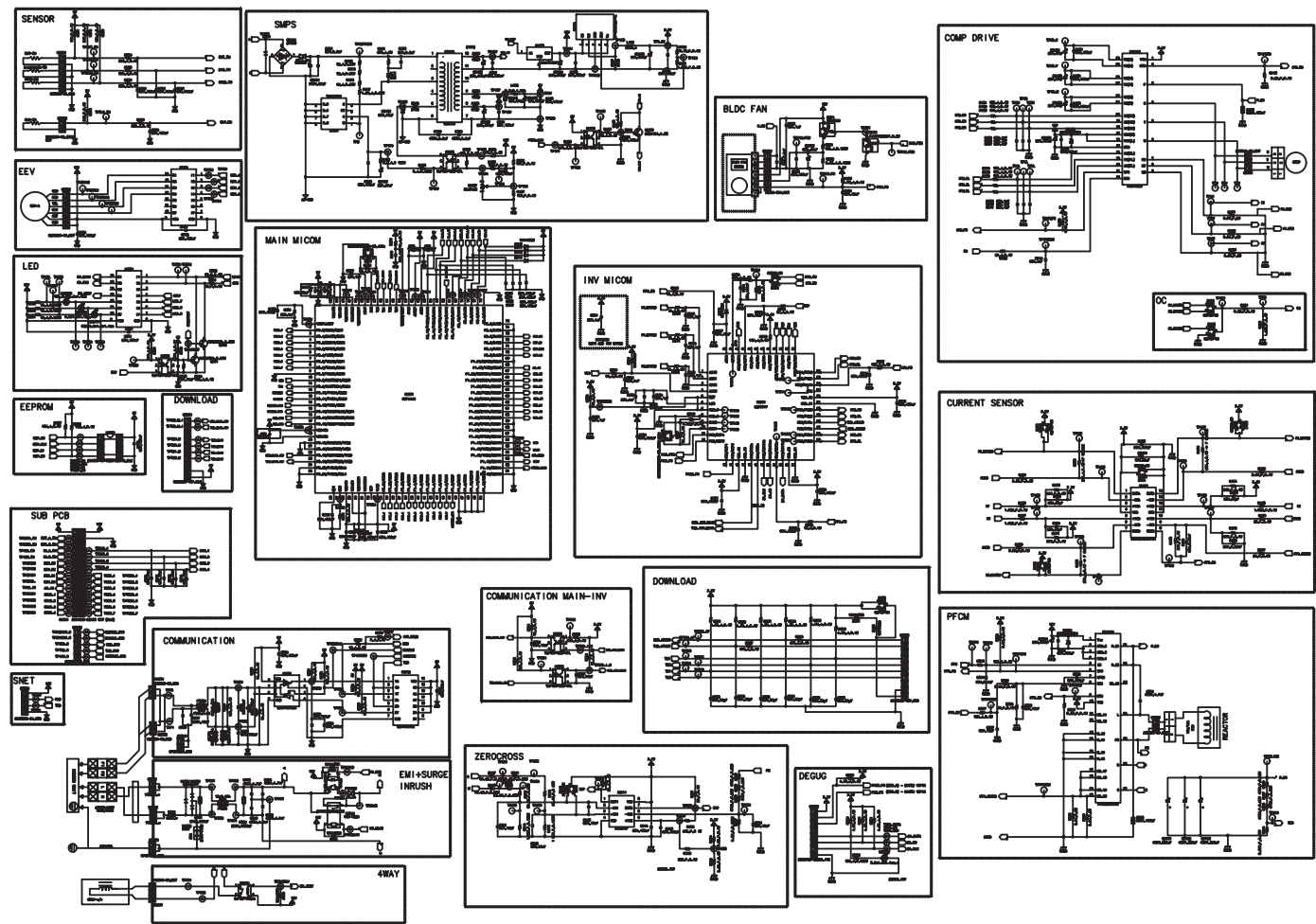
7-2 OUTDOOR UNIT PCB

7-2-4 SUB PCB (RC035/052DHXEA)

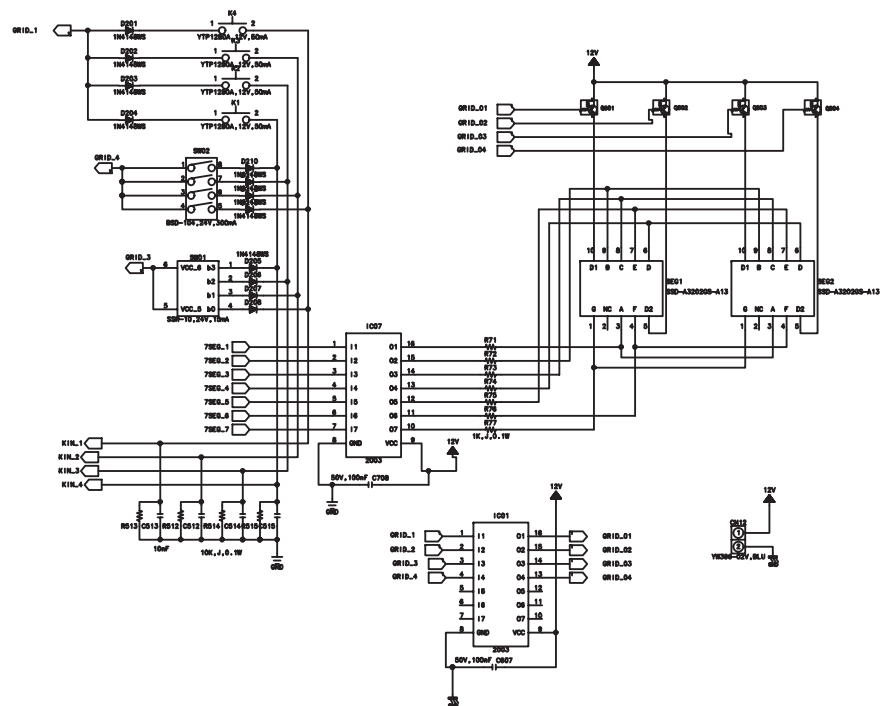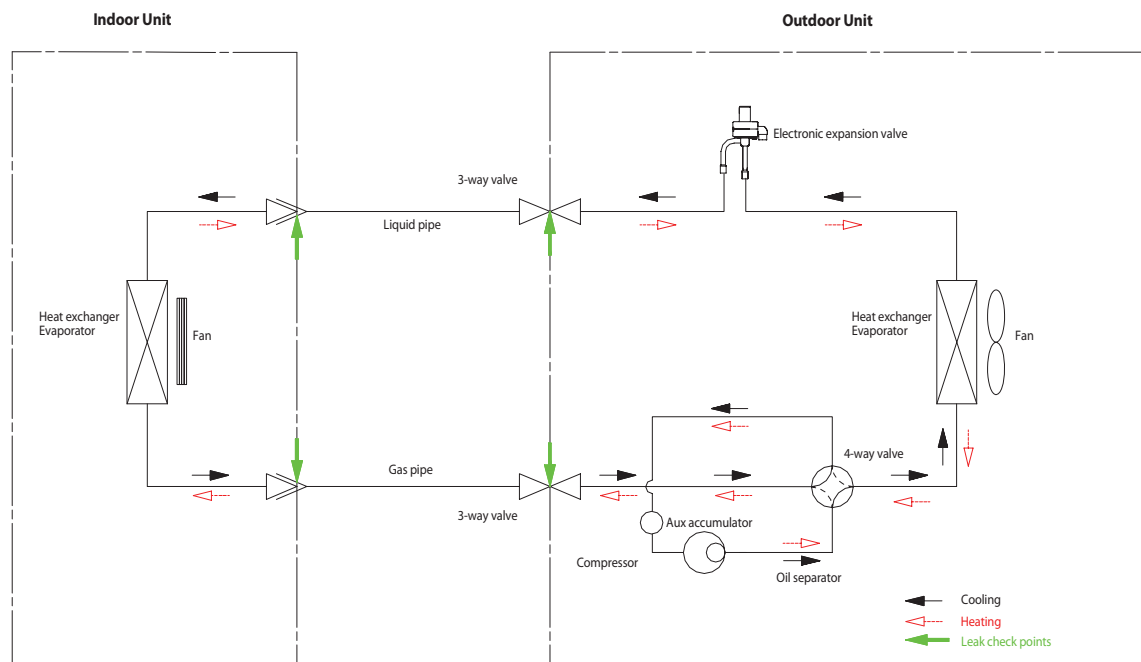This Document can not be used without Samsung's authorization.

8. Preference Sheet

8-1 Refrigerating Cycle Diagram

■ CONDENSER

High temperature and high pressure gas state coolant discharged from the compressor is converted to a liquid state as it is cooled down by the heat emission in the outdoor condenser unit, and sent to the evaporator.

■ COMPRESSOR

Low temperature and low pressure coolant is compressed and sent to the cycling system

■ EVAPORATOR Liquid coolant sucked in through the capillary tubes cools down the room by absorbing the surrounding heat as it evaporates (converting from liquid to gas). (Absorbing heat required for evaporation)

■ SERVICE VALVE

You can open the valve by turning the need valve counterclockwise using hex wrench, and it is used for vacuum, gas purging, coolant injection, coolant purging, and indoor-outdoor unit connection.

■ ACCUMULATOR

Accumulator prevents the flow of liquid-state coolant into the compressor. (Liquid-state coolant flowing into the compressor will overload the compressor.)

8-2 Index of Model Name

RC	140	D		H	X	E	A	/	-	-	-
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				

Buyer code

(I)Product Type		
R	D	DVM
	J	FJM
	C	SINGLE(CAC)

(2)Capacity
HP / KW / BTU / TON

(3)Chassis		
P	Inverter RPM
D	Inverter DLX
S	Inverter DLX
F	Constant rate (value)
X	Constant rate (tender)
Z	Flagship
T	Tower (Top Discharge)
U	Ice box

(4) Separator		
1	1WAY	CST
2	2WAY	
M	MINI 4 WAY	
4	4WAY	
H	High Static Pressure	DUCT
S	Middle Static Pressure	
L	Low Static Pressure	
C	CEILING	CONV
J	CONSOLE	
F	PAC	
P	FAC	

(5)MODE	
C	C/O
H	H/P
E	H/P+HEATER
G	C/O+HEATER
T	TROPICAL C/O
Q	TROPICAL H/P

(6)Refrigerant	
R22	R
R410A	X

(7)Power Supply	
Normal	N
115V,60Hz	A
220V,60Hz	B
208~230V,60Hz	C
200~220V,50Hz	D
220~240V,50Hz	E
208~230V,60Hz,3Φ	F
380~415V,50Hz,3Φ	G
127V, 50Hz	M
380V/60Hz,3Φ	H
460V,60Hz,3Φ	J

(8) VERSION	
1~9	KOREAN
A~Z	EXPORT

NS	071	L	D	X	E	A	/	-	-	-
(1)	(2)	(3)	(4)	(5)	(6)	(7)				

Buyer code

(I)Product Type		
N	D	DVM
	J	FJM
	M	MULTI
	S	SINGLE(CAC)
	H	Hydro-Box

(2)Capacity
HP / KW / BTU / TON

(3)Chassis		
1	1WAY	CST
2	2WAY	
M	MINI 4 WAY	
4	4WAY	
H	High Static Pressure	DUCT
S	Middle Static Pressure	
L	Low Static Pressure	
C	CEILING	CONV
J	CONSOLE	
F	PAC	
P	FAC	
B	Mont Blabc	RAC
V	VIVACE	
Q	NEO-FORTE(EEV)	
N	NEO-FORTE	

(4)MODE	
C	C/O
H	H/P
T	Tender
V	Value

When grade classification is necessary	
Z	H/P (Flagship)
P	H/P (Premium)
D	H/P (Deluxe)
S	H/P (Standard)
CP	H/P (Premium)

(5)Refrigerant	
R22	R
R410A	X

(6)Power Supply	
Normal	N
115V,60Hz	A
220V,60Hz	B
208~230V,60Hz	C
200~220V,50Hz	D
220~240V,50Hz	E
208~230V,60Hz,3Φ	F
380~415V,50Hz,3Φ	G
127V, 50Hz	M
380V/60Hz,3Φ	H
460V,60Hz,3Φ	J

(7) VERSION	
1~9	KOREAN
A~Z	EXPORT
Z	The Z version is a high-efficiency EEV Mode indoor unit.

SAMSUNG ELECTRONICS

GSPN(Global Service Partner Network)

Area	Web Site
Europe	http://gspn1.samsungcsportal.com
CIS	http://gspn1.samsungcsportal.com
Mideast & Africa	http://gspn1.samsungcsportal.com
Asia	http://gspn2.samsungcsportal.com
North America	http://gspn3.samsungcsportal.com
Latin America	http://gspn3.samsungcsportal.com
China	http://china.samsungportal.com